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ON THE SHIFTING AND INCIDENCE OF TAXATION.

BY

EDWIN R. A. SELIGMAN,

Professor of Political Economy and Finance, Columbia College.

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INTRODUCTION.

The problem of the incidence of taxation is one of the most neglected, as it is one of the most complicated, subjects in economic science. It has indeed been discussed by many writers; but its discussion in scientific literature, as well as in every-day life, has frequently been marked by what Parieu calls the "simplicity of ignorance". And yet no topic in public finance is more important. For in every system of taxation the cardinal point is its influence on the community. Without a correct analysis of its incidence, no proper opinion can be formed as to its justice or its actual effect. It is time for an attempt to be made not only to pass in review all the theories hitherto advanced, but to contribute to the solution of some of the theoretic problems while paying special attention to the practical aspects of the discussion.

A word first as to the terminology. In the process of taxing we must distinguish three conceptions. First, a tax is imposed on some person; secondly, it may be transferred by him to a second person; thirdly, it may be ultimately borne by this second person, or transferred to others by whom it is in last instance assumed. The person who pays the tax in first instance may thus not be the one who bears its burden

in last instance. This process of the transfer of the tax is known as the *shifting* of the tax, while the final burden on the ultimate tax-payer is called the *incidence* of the tax. The incidence of the tax is therefore the result of the shifting, and the real economic problem is the study of the shiftings.

The English language is unfortunately deficient in its nomenclature. While *incidence* conveys to the mind the notion of the ultimate result of the shifting, we have no word to express the immediate result of the original imposition of the tax. "Assessment" of the tax looks upon the process from above downward. We have no term to express the process from below upward. The French and the Italians have the words *percussion, percussione* to express this idea of the primary result of the assessment, and hence logically term the shifting of the tax the *repercussion*[1] of taxation, the ultimate result of which is the incidence (*incidence, incidenza*). But we in English must content ourselves with the awkward term "original incidence" while "incidence", when used alone, technically means the ultimate incidence or the result of the intermediate process. But the incidence or the result must never be confounded, as is so often the case, with the shifting or the process.

Again, the shifting of the tax must not be confounded with what is known as the evasion or escape of the tax. Shifting is the non-payment of the tax through the transfer to some one else; evasion is the non-payment of the tax without any transfer. A tax may be thrown off entirely without being

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[1]They also use the words *translation, traslazione,* which are the same as our "transference"—shifting. The French also speak of taxes being "rejetés"—our "thrown off" or "shifted".

shifted to anyone. Evasion may be either legitimate or illegitimate, conscious or unconscious. For instance, through smuggling we have an illegitimate evasion, but no shifting, of the tax. On the other hand, when a new tax is a partial cause of improved processes of production, as e. g. the beet-sugar tax in Europe, or the whisky tax in America at one time, the producer evades the tax to a certain extent, but does not shift it. This is the case of a legitimate evasion. Finally, when the process of capitalization of incidence takes place—a process that will be fully explained later, but whose main features may be said to consist in the fact that the purchaser of a taxable object under certain circumstances discounts the tax which he will have to pay in the diminution of the purchase price—,there is practically an evasion of taxation, but no shifting. In this case the evasion is unconscious; in both the preceding cases the evasion was the result of a conscious effort. The distinction between evasion and shifting has puzzled many writers. We shall have occasion to revert to it constantly.

The Germans have devised a very elaborate nomenclature to distinguish the various kinds of shifting, as e. g. whether a tax is shifted forwards from the producer on to the consumer, or back from the consumer to the producer, or further on from one consumer to another.[1] But this nomenclature is utterly impossible in English, and is moreover of not much importance, especially as scarcely any two writers use the terms in precisely the same way, and as the

[1]The German terms are *Abwälzung*, *Fortwälzung*, *Rückwälzung*, *Weiterwälzung*, and the general term *Ueberwälzung*. Their *Abwälzung* is nothing but our "evasion", and not a form of shifting at all. Some few writers, however, like Roscher, use "Abwälzung" to denote shifting in general. There is no unanimity in the usage.

would-be fine distinctions have only served to bring about a confusion between evasion and shifting.

Finally, we must not confound the incidence of taxation with the effect of taxation. A tax may have a great many effects. It may diminish industry and impoverish individuals; it may in some cases stimulate production and enrich individuals; it may be an unmitigated curse to society; it may be a necessary evil; it may be an unqualified boon to the community regarded as a whole. With none of these problems does the study of incidence busy itself. All that we have to investigate is: On whom does the tax ultimately fall? When we once know this we can then proceed to the further discussion of the effects produced on the various classes or individuals by the pressure of taxation. The problem of incidence concerns itself simply with the one question of fact,—who really pays the tax? It does not pretend to unravel the final consequences of taxation. The shifting is the process; the incidence is the result; the changes in the distribution of wealth are the effect.

The discussion of incidence thus depends entirely on the investigation of the shiftings of taxation. The real problem before us is to ascertain the condition according to which a tax is shifted onwards, backwards or not at all. Only when we understand why and how a tax is shifted, can we discover its actual incidence.

In the following pages an attempt will be made to attack the problem first by giving a detailed history of the doctrine, secondly by taking up the chief separate taxes one by one, and finally by drawing the general conclusions applicable to the science of public finance.

CHAPTER I.

THE HISTORY OF THE DOCTRINE OF INCIDENCE.

Although it is not always possible to draw the line sharply between various schools of writers, we may, nevertheless, assert that there have been no less than ten different theories of the incidence of taxation.[1] These are what may be called:

I.—The Early theories.
II.—The Physiocratic theory.
III.—The Absolute theory.
IV.—The Diffusion or Optimistic theory.
V.—The Pessimistic theory.
VI.—The Capitalization or Amortization theory.
VII.—The Eclectic theory.
VIII.—The Agnostic theory.
IX.—The Socialistic theory.
X.—The Quantitative or Mathematical theory.

[1]The only works which contain a history of the theory of incidence are the German works of J. Kaizl, "Die Lehre von der Ueberwälzung der Steuern", 1882, and G. v. Falck, "Kritische Rückblicke auf die Entwickelung der Lehre von der Steuerüberwälzung seit Adam Smith", 1882. Both these works are very inadequate, although Kaizl's is by all means the better. Whole classes of authors are omitted, among them some of the most important. Both works are chronological and make almost no attempt to analyze the theories according to schools. Falck's book is richer in the account of the earlier German writers. Kaizl is better acquainted with several of the French writers, but omits some of the most noteworthy. Both writers almost entirely neglect the English authors except Smith, Ricardo and Mill, and utterly ignore the Italian, Spanish and American writers on the topic. Falck is almost without any positive constructive ideas at all, while Kaizl is such a slavish adherent of one or two German predecessors that his own constructive work is very insignificant. But both books are nevertheless to be recommended as the most valuable that we possess on the history of the doctrine.

I.—The Early Theories.

The English writers on public finance during the seventeenth and eighteenth centuries prior to Adam Smith, may be divided into four classes, in so far as the practical inferences from the doctrine of incidence of taxation are concerned:

A.—Those who favor a general excise.
B.—Those who favor a single tax on houses.
C.—Those who favor a single tax on land.
D.—Those who favor a more eclectic system.

A.—*Those who favor a general excise.*

The project of a general tax on consumption was a favorite one with many of the early writers. It gradually met with both adherents and opponents until under Walpole it became the subject of a fierce controversy. We are here concerned not so much with the project itself as with the theory of incidence on which it was based.[1]

The earliest writers to propose a system of excises did so because they thought that an excise would simply be shifted to the consumers and remain on them. Since their ideal was a tax on expense, the ideal would be best attained by a general excise. The first writer to posit expenditure as the basis of

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[1]Those who care to go into the literary history of the controversy are referred to the excellent monographs of Leser, "Ein Accisestreit in England, Heidelberg", 1879; and of Ricca-Salerno, "Le dottrine finanziarie in Inghilterra tra la fine del secolo XVII e la prima metà del XVIII", Bologna, 1888. In addition to the pamphlets there discussed, a list of other contemporary pamphlets may be found in the bibliography printed by Sinclair "History of the Public Revenue of the British Empire", 3rd ed. 1804, Vol. III, app. 94-136.

taxation was Hobbes.[1] And the general idea is well expressed in the statement of Cradock, that "the Generall Excise (so much decryed and Petitioned against) in its proper Constitution, is the most equitable of Impositions, no man being charged with it, but he who sells for profit, to the consumption of the Commodity, who in truth pays it insensibly without Complaint."[2]

Other writers, however, took a little different view of the incidence of such taxes. And among them perhaps the first economist to treat the question was the famous advocate of the Mercantile theories, Thomas Mun.

Mun discusses the tax systems of Italy and Holland, and finds their essence to consist in "customs on wares transported, customs upon every alienation or sale of live Cattel, Lands, Houses and the portion or marriage money of women, licence money upon all Victualling houses and Innkeepers, head money, Custom upon all the Corn, Wine, Oyl, Salt and the like, which grow and are consumed in their own dominions." Now these all seem to be "a rabble of oppressions to make the people poor and miserable."[3] But Mun declares this to be a mistake. For in proportion as the necessaries of life increase in price, the rate of wages must also rise. In the long run, therefore, the taxes on the poor will be shifted to the

[1]Hobbes, "The Leviathan", chap. 30, part 2, p. 181 of the 1651 edition. (Reprint of 1881, p. 270).

[2]Francis Cradock, "An Expedient for Regulating the Customes and Excise, Approved by Divers well affected Marchants and others of the City of London", 1659, page 1.

[3]Thomas Mun, "England's Treasure by Forraign Trade, or the Ballance of our Forraign Trade is the Rule of our Treasure", 1664, Chap. xvi: "How the revenues and incomes of princes may justly be raised".

employers and the rich.[1] And this is a good thing because the rich will thus be "forced to abate their sinful excess and idle retainers."[2] Mun's idea, it is plain, is that taxes on consumption are to be commended because they will be shifted to the employing producer.

A far fuller theory of incidence is found in the first English book devoted entirely to taxation, a work written by Sir William Petty. Petty first discusses the procuring of revenue from land, which he says can be done in two ways: either by "setting apart a proportion of the whole Territory for Publick Uses", or by "an excision of the land by way of assessment or land taxe." Such a land tax, where an "aliquot part of every Landlord's Rent were excinded or retrenched" is good in a new country, where a certain quit-rent is reserved beforehand, because it will be borne partly by the landlord but partly by the consumers. For "it is not only the Landlord pays but every man who eats but an Egg, or an Onion of the growth of his Lands; or who useth the help of any Artisan, which feedeth on the same."[3] In old countries like England, where rents are fixed for a long time, such a tax would be unjust because it would benefit only the landlords who renew their rents. These gain doubly, "one way by the raising

[1] "Neither are these heavy Contributions so hurtful to the happiness of the people, as they are commonly esteemed: for as the food and rayment of the poor is made dear by Excise, so doth the price of their labour rise in proportion; whereby the burden (if any be) is still upon the rich, who are either idle, or at least work not in this kind, yet have they the use and are the great consumers of the poors labour". *Ibid.* p. 154.

[2] *Ibid.* p. 155.

[3] Petty, "A Discourse of Taxes and Contributions", 1677, Chap. iv I quote from the edition of 1691, page 20.

of their Revenues, and the other by enhansing the prices of provisions upon them." For the tax "doth ultimately light upon the consumptioners," or as he again puts it a "Land-tax resolves into an irregular Excize upon Consumptions, that those bear it most, who least complain."[1]

Petty also discusses the house tax or "an Excisium out of the Rent of Housing." He deems the influence of this much more uncertain than that of land, "for an house is of double nature, viz.: one, wherein it is a way and means of expence: the other, as 'tis an Instrument and Tool of gain. . . . . Now the way of a Land-tax rates housing, as of the latter nature, but the Excize as of the former."[2] From which it may be inferred that Petty thinks a house-tax will be shifted to the consumer or occupier, and will be shifted further on to other consumers when the occupier is himself a producer.

In regard to "customs," both "outwards" and "inwards", Petty assumes that they will be shifted to the consumers, and concerns himself only with stating the principles on which they should be levied.[3] Poll-money, he thinks, cannot be shifted: and he opposes the tax because it is very unequal.[4] He concludes that a general excize on consumptions is the best of all taxes, assuming that it cannot be shifted any further. For land and house taxes are only partially shifted. This is not the place to discuss

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[1] *Ibid.* page 21.

[2] *Ibid.* page 21.

[3] *Ibid.* pp. 34–40.

[4] Petty grows very indignant over the English system: "so as by this confusion, arbitraries, irregularities and hotch pot of qualifications, no estimate could be made of the fitness of the plaister to the sore". *Ibid.* p. 41.

Petty's many reasons for favoring a tax on expense.[1] For our purposes it is sufficient to state that, starting out from the principle that a tax on expenditure is the ideal tax, he favors the general excise as attaining this result most speedily and most certainly.

The views of Petty gradually diffused themselves throughout the community until the English system of taxation became largely one of indirect taxes upon consumption. Mun's theory, that in so far as taxes on consumption were taxes on the necessaries of life of the laborers they would be shifted to the employers, was now abandoned, and the excise was upheld just because it fell upon the consumer. It was now imagined that taxes on the necessaries of life would form the greatest stimulus to an improvement in the conditions of labor, in sobriety and care and efficiency. A tax on labor would thus be a real spur to industry and commerce. This idea is found in many writers and was most strongly expressed later on in an essay by Temple, who maintains that "the only way to make the poor temperate and industrious, is to lay them under a necessity of laboring all the time they can spare from meals and sleep, in order to procure the common necessaries of life."[2]

B.—*Those who favor a single tax on houses.*

The views of Petty and his school on the incidence of the excise met with considerable opposition on the

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[1]They may be found in Chap. xv, pp. 68-72.

[2][William Temple.] "A Vindication of Commerce and the Arts". By I. B. 1758. In Lord Overstone's "Select Collection of Scarce and Valuable Tracts on Commerce", (1859) p. 534.. . . . . . . McCulloch in his "Literature of Political Economy," 332, quotes an anonymous pamphlet especially devoted to this subject: "Considerations on Taxes, as they are supposed to affect the price of Labour in our Manufactures", etc., 1765. See esp. pp. 29-31.

part of those who, without knowing it, again reverted in some degree to the theory of Mun. The opponents of the general excise now denied that the tax would prove a spur to industry. They maintained, on the contrary, that the tax would be shifted from the producing consumer to the producing employer and that a general excise would hence be a serious drag on all production and industry; and they therefore proposed, instead of a general excise, a single tax on houses. The chief advocate of this theory was Sir Matthew Decker.

Decker, it is true, also calls his scheme one for a "general excise", but goes on to explain that he means only a "single excise duty upon houses".[1] He discusses its benefits at great length and finds its chief merits to lie in the fact that "it would prevent all Manner of Running and hinder the Ruin of many Thousands of poor unhappy Creatures, which have been or are still employed in the Smuggling Trade"; that "it would set the Merchant and Shopkeeper free from a multitude of false and vexatious or frivolous Informations, which may now be lodged against them". But above all he advocates the plan because it would enable "the Merchant as well as the Shop and Warehouse keeper to trade with half the stock and make his Profit the same or rather increase it."[2]

Everywhere we find the emphasis put on the interests of production and trade because of the opinion

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[1] "Serious Considerations on the several High Duties which the Nation in general (as well as its Trade in particular) labours under: with a Proposal for preventing the Running of Goods, discharging the Trader from any search, and raising all the Publick Supplies by one Single Tax. By a Well-Wisher to the Good People of Great Britain". [Sir Matthew Decker.] London, 1743, p. 15.

[2] *Ibid.* p. 24.

part that in the long run the incidence of the existing taxes is upon them. In fact Decker wishes to have the houses "of the lowest and poorest Sort of People" exempt from the tax on the express ground that "thereby their labour might become so much the cheaper."[1] And Decker closes his exposition with the hope that it may be said of England, as formerly of Tyre, "that their Merchants are Princes and their Traffickers the Honourable of the Earth".[2]

Decker's project was greeted by a number of writers, but soon met with determined opponents of whom the most prominent was Massie. Massie specified all manner of objections to the scheme, into which it is not necessary to enter here. In so far as the doctrine of incidence is concerned, he simply reverted to the old theory that "the taxes of this kingdom are so wisely laid as to encourage Industry, and good Husbandry, by discouraging their Opposites."

C.—*Those who favor a single tax on land.*

The theory that all taxes are finally shifted to the land-owner is commonly ascribed to the French Physiocrats. Yet the same theory was expounded in England long before the Physiocrats, although only in part for the same reasons. The first inkling of the doctrine is found in a writer of a celebrated seventeenth century tract, who

[1] *Ibid.* p. 16.

[2] *Ibid.* p. 32.

[3] "The Proposal commonly called Sir Mathew Decker's scheme for one general tax upon Houses laid open and shewed to be a deep concerted Project to traduce the Wisdom of the Legislature; disquiet the Minds of the people: and ruin the Trade and Manufacturies of Great Britain". [By Joseph Massie.] London, 1757, esp. p. 68.

contends that the landowners "bear all the Taxes and publick burthens: which in truth are onely born by those who buy and sell not: all sellers raising the price of their commodities, or abating of their goodness, according to their taxes".[1]

This theory of incidence was, however, worked out much more fully by John Locke.

Locke lays down his general thesis in the words: "Taxes however contrived, and out of whose hands soever immediately taken, do, in a country, where the great fund is in land, for the most part terminate upon land".[2] To prove this Locke first attempts to show that a tax levied on the landowner cannot be shifted. If the "country gentleman" actually pays the tax out of his pocket he certainly feels its burden. But "this influences not at all the yearly rent of the land, which the rackrenter or under tenant pays: it being the same thing to him, whether he pays all the rent to the king or to the landlord." For the "tenant's bargain and profit are the same, whether the land be charged, or not charged, with an annuity payable to another man". The landowner, in other words, cannot shift a land tax.

But how is it if taxes are levied not on land but on commodities? A tax on commodities, says Locke, must raise the price of the commodities to the consumer. "Let us see now who, at long run, must pay

[1] "Reasons for a Limited Exportation of Wooll", 1677, p. 5. The author also states that the landowners "are Masters and Proprietaries of the foundation of all the wealth in this Nation, all profit arising out of the Ground, which is theirs". Therefore it is much more to the interest of the nation to "preserve the Nobility and the Gentry, than a few Artificers or the Merchants".

[2] John Locke, "Some considerations of the Consequence of lowering the Interest, and raising the Value of Money", 1691. In "Collected Works", 12th edition, 1824, Vol. IV, p. 55.

this and where it will light". The merchant and broker will not pay it, for "if he pays more for commodities than he did, he will sell them at a price proportionably raised". On the other hand the "poor labourer and handicraftsman cannot pay the tax, for he just lives from hand to mouth already". The consequence of a tax on the laborer will be either that "his wages must rise with the price of things to make him live; or else not being able to maintain himself and family by his labour, he comes to the parish; and then the land bears the burthen a heavier way". But if the laborer's wages rise, the farmer must pay more for wages as he does for other things, "whilst he sells his corn and wool, either at the same rate or lower, at the market (since the tax laid upon it makes people less forward to buy.) . . . . So the yearly value of the land is brought down. And who then pays the tax at the year's end but the landlord"?[1]

A tax on commodities imported will always be shifted from the merchant to the consumer, and in fact the importer will generally expect a profit and "raise his price above what his taxes comes to". For "you must not think that the raising their price will lessen the vent of fashionable, foreign commodities amongst you". But with the produce of the land it is different. "Your landholder being forced to bring his commodities to market, such as his land and industry afford him, common and known things, he must sell them there at such price as he can get". When a tax on land is laid on these "homebred commodities", which are seldom "the favorites of your people", every one will make as sparing a use of them as possible, prices will fall and rents will decrease.

[1] *Ibid.* p. 58.

Hence Locke concludes in the famous passage: "It is in vain, in a country whose great fund is land, to hope to lay the public charge of the government on anything else; there at last it will terminate. The merchant (do what you can) will not bear it, the labourer cannot, and therefore the landowner must; and whether it were best to do it, by laying it directly where it will at last settle, or by letting it come to him by the sinking of his rents, which when they are once fallen, every one knows are not easily raised again, let him consider".[1]

Locke's theory was accepted by the renowned financier Davenant, who maintained that "all taxes whatsoever are in their last resort a charge upon land".[2] So also Asgill[3] and Cantillon[4] were worthy forerunners of the Physiocrats in so far as they asserted that land was the real foundation of all wealth, and thus ultimately bore the weight of all taxes. But after Locke the theory was most fully explained by Vanderlint.

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[1] *Ibid.* p. 60.

[2] Davenant, "An essay upon Ways and Means", 1695. In "Collected Works", edited by Whitworth, p. 77.

[3] Asgill, "Several Assertions Proved in order to Create another Species of Money than Gold or Silver", 1696, esp. p. 20: "Man deals in nothing but earth; the merchants are the factors of the world to exchange one parte of the earth for another. The king himself is fed by the labour of the ox and the cloathing of the army and the victualing of the navy, must all be paid for to the owner of the soil as the ultimate receiver, and whatever the ultimate receiver will demand or accept must be a rule for the intermediate receivers to govern themselves by".

[4] Cantillon, "Essai sur la Nature du Commerce en Général", 1755. (Translation of the English work written before 1734 but not published) See esp. Chap. xii: "Tous les Ordres et tous les Hommes d'un Etat subsistent ou s'enrichissent aux dépens des Propriétaires des Terres".

Vanderlint maintains that if all the then existing taxes were suddenly repealed, prices of commodities would either remain the same or change. If they remained the same, supposing that there had been no change in the quantity of the money supply, the cost of production would decrease because of the abolition of the tax on producers. The difference between cost and price, however, is rent. Hence the only result would be to increase the rent of the landowner. On the other hand if prices were to fall, low prices would cause an expansion of the demand. But since all commodities in last resort come from the land, increased demand means increased rent. Thus from either point of view remission of taxes enures to the welfare of the landlord. Or, in other words, the incidence of all taxes is on the land. Hence Vanderlint proposes a single tax on land, as far cheaper and better than the existing complicated and inconvenient system of taxes, which after all in last resort fall on the land.[1]

D.—*Those who favor a more eclectic system.*

The single tax idea soon met with considerable opposition. The anonymous author of a widely read monograph maintains that "Mr. Locke's position, taken in its full extent and without any limitations is greatly controvertible," and "that the maxim seems

[1]Jacob Vanderlint, "Money answers all Things: or an Essay to make Money sufficiently Plentiful amongst all Ranks of the People and Increase our Foreign and Domestic trade, etc." 1734.—Asgill and Vanderlint were first quoted by Dugald Stewart in his appendix to the Life of Adam Smith, and in his Lectures on Political Economy delivered in 1800–1809, but first published in 1877, Vol. II, 239 Kautz, "Die geschichtliche Entwicklung der National-ökonomik und ihrer Literatur" 1860, 320–322 also refers to them.

to go farther than reason and experience will warrant."[1] He does not object to the statement that a tax laid upon farmers' produce "makes people less forward to buy"; but he does not see "why that reason should not have the same operation upon other commodities." The demand for commodities, he thinks, depends "on the quantity of money subsisting in the market"; and if this quantity is unchanged, an increased tax on the general trader must diminish mercantile profits.[2] The same argument which goes to prove that a land tax cannot be shifted also proves that a tax on traders' profits can not be shifted. But our author makes one notable exception, and maintains that it is useless to try to tax "moneyed men" on their personal property. For taxes on mortgages or on the public funds would be shifted to the mortgageor or the public respectively through a corresponding increase in the rate of interest.[3] Finally he objects to any further increase in the excise taxes "for one thing is certain, that no good can be produced by taxes upon commodities. They may starve the industrious, but they never will induce the idle and extravagant to labour and to

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[1] "Considerations upon a Reduction of the Land Tax", 1749, pp. 15–19. I have never seen this work referred to by any modern writer.

[2] "And if additional taxes be laid, while the money, with which commodities are to be purchased, remains unincreased, the trader must be contented with smaller gains, or not trade at all. And the first part of the alternative will always be the case where the profits of a flourishing trade may well support some diminution". *Ibid.* p. 14.

[3] "Were mortgages or the funds to be taxed, matters would not be mended. For, as taxes, wherever placed, can have no tendency to lower the interest of money; they, who buy into the funds, would buy so much cheaper as the tax would amount to, and the lender upon mortgages insist upon a higher rate of interest". *Ibid.* p. 25.

save for the benefit of the landlord".[1] And, therefore, while not an advocate of any single tax on land, the author objects to any decrease in the land tax which would involve a further increase in the taxes on trade and commodities.

The general doubt as to the value of Locke's theory is seen in a number of other works. Postlethwayt, one of the prominent writers, refers to the opposition although he does not attempt to give his reasons.[2] But the most famous opponents were the two chief economists of the third quarter of the eighteenth century, Hume and Steuart.

Hume passes over the theory of incidence with a very few words. He discusses Locke's doctrine, and opposes it strongly on the ground that while every one tries to shift a tax to some one else, no one set of men can ever entirely succeed.[3] Hume's theory, in short, results simply in the very vague conclusion that not every one is able to shift all taxes.

The fullest discussion of the incidence of taxation before Adam Smith is to be found in the works of Sir James Steuart. Steuart divides all taxes into three kinds, proportional, cumulative and personal. Proportional taxes are those which fall upon expense

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[1] *Ibid.* p. 17.

[2] Malachy Postlethwayt, "Great Britain's True System, etc.," 1757, p. 306: "If Mr. Locke's observation that all taxes in general ultimately terminating upon landed (*sic*), should be exceptionable, as some think it, yet", *etc.*, *etc.*

[3] "Every man, to be sure, is desirous of pushing off from himself the burthen of any tax which is impos'd, and laying it upon others. But as every man has the same inclination, and is upon the defensive, no set of men can be suppos'd to prevail altogether in this contest. And why the landed gentlemen shou'd be the victim of the whole, and shou'd not be able to defend himself, as well as others are, I cannot readily imagine." Hume, "Political Discourses." Discourse viii, Of Taxes, page 121 of the ed. of 1752.

(what we would call indirect taxes); cumulative or arbitrary taxes are those which affect property ; and personal taxes are those which consist in personal service. Proportional taxes are always "drawn back" (i. e. shifted) by the industrious consumer. That is, Steuart thinks that in so far as a consumer purchases anything else he is an industrious consumer, except in so far as the "consumption made by the latter is an article of superfluity". In other words, taxes on the necessaries of life are shifted from wage-earner to the employer because the wage-earner is a "physical necessarian" who accumulates no profits.[1] But if he spends his money on taxable articles which other members of his class do not use, he cannot shift the tax. "A tanner sells his leather to a shoemaker; the shoemaker, in paying the tanner for his leather, pays the tanner's subsistence and profit, and the tax upon leather. A man who buys shoes of the shoemaker refunds all this to the shoemaker together with his subsistence, profit and the tax upon the shoes; consequently the price of shoes are (*sic*) raised, only by refunding the taxes paid by the industrious. But if the shoemaker's subsistence should happen to include either tavern expenses or his consumption on idle days, he will not draw these back: because other shoemakers who do not frequent the tavern and who are not idle will undersell him". All proportional taxes therefore in last resort fall upon "the rich and idle consumer of the manufacture, who can draw nothing back from anybody. The whole reimbursement of all former payments and repayments comes upon him". Hence Steuart concludes that it is absurd to

[1] Steuart, "An Inquiry into the Principles of Political Economy," 1767, Book V., Chap. iii. In Collected, Ed. of 1805, IV, 185.

say that all taxes ultimately fall upon land, or upon trade. "Proportional taxes never can fall either upon, or affect any person but the idle, that is to say the non-industrious consumer."[1]

With regard to what he calls cumulative taxes Steuart lays down the general rule that "the nature of all these taxes is to affect the possessions, income and profits of every individual, without putting it in their power to draw them back in any way whatever; consequently such taxes tend very little towards enhancing the price of commodities."[2] Such taxes ought therefore generally to be dispensed with. Taxes on land, he thinks, do not augment the price of wheat as they raise the price of excisable goods, because if the proprietor were to attempt to raise the price of his grain in proportion to the tax, his farmer who pays no land tax would undersell him.[3] All attempts to levy a tax on money, however, will be unsuccessful, while a tax on trade profits, although it would tend to rest on profits, is not to be recommended, because, "although they appear to be income, I rather consider them as stock, which ought not to be taxed".[4] Steuart's final conclusion is expressed in these words: "I conclude that no objection can lie against proportional taxes so far as they affect the industrious, because they draw them completely back: and that great objections lie against cumulative taxes, when they affect the industrious, because they cannot draw them back at all: and consequently they may affect the physical-necessary of the contributor, in case no profit should remain to him upon

[1] *Ibid.* p. 189; *Cf.* p. 209.
[2] *Ibid.* p. 191.
[3] *Ibid.* p. 265.
[4] *Ibid.* p. 250.

his labor. On the other hand I think little objection can be made to cumulative taxes, when they are imposed upon possessions, which produce a visible annual revenue clear to the proprietors."[1]

It is clear, therefore, that by the third quarter of the eighteenth century the economists, although differing among themselves were united in opposing Locke's theory of the shifting of all taxes to land. It is no wonder that Dugald Stewart wrote a few decades later, in reference to the single tax idea: "I shall only remark that the first idea of it was borrowed from this country, where it has been repeatedly suggested by authors of reputation, although it had been almost forgotten as an exploded chimera, when it was revived by the Economists of France.[2]

II. The Physiocratic Theory.

The Physiocratic theory of incidence was outlined by the founder of the sect, Quesnay; it was developed in 1760 by Mirabeau in his *Théorie de l'Impôt;* it was discussed from all sides by Mercier de la Rivière in 1767; and it was finally completed by various works of Turgot, above all in his memoir written for Benjamin Franklin to prevent the adoption of any but the single tax by the nascent government of the United States. The theory may be summed up as follows:

Agriculture is the sole source of wealth. It is the only productive employment because it alone furnishes a *produit net* or surplus above the necessary

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[1] *Ibid.* p. 221.

[2] Dugald Stewart. "Lectures on Political Economy, Now First Published", 1877, II, 238.

expenses of production. All other occupations are utterly unproductive or "sterile." Industry and commerce may be useful and even necessary to a community, but they are economically unproductive because they do not create new wealth, but simply transform existing wealth. They may increase values, but the increase of value must be exactly equivalent to the labor expended; and the value of this labor again is in last resort dependent on the value of the food or objects furnished by the agricultural class. Since, therefore, the "net product" of agriculture is the sole fund or source of wealth, all taxes, however levied, must ultimately be paid from this fund. And therefore it is much better to assess this fund *directly* by a land tax, than to assess it *indirectly* by any other tax, for in this way you save expense and trouble. But whether you levy direct or so-called indirect taxes, the incidence is always on the land.[1]

[1]The chief passages are Quesnay, "Maximes Générales du Gouvernement," V: "Que l'impôt soit établi immédiatement sur le produit net des biens fonds"; Second Problème économique: "Du quelque façon qu'on s'arrange, les propriétaires de la terre payent inévitablement la totalité de l'imposition indirecte" (Daire's edition of the Physiocrats, pp. 83, 134); Mirabeau, "Théorie de l'Impôt," 150: "L'impôt doit etre établi immédiatement sur la réproduction annuelle"; Mercier de la Rivière, "L'Ordre Naturel des Sociétés Politiques," Chap. IV: "La forme essentielle de l'impôt consiste à prendre directement l'impôt où il est et à ne pas vouloir le prendre où il n'est pas . . . Les fonds qui appartiennent a l'impôt ne peuvent se trouver que dans les mains des propriétaires foncières. L'impôt doit être pris sur les produits nets des terres, et demandé par conséquent à ceux qui sont possesseurs de ces produits . . . Changer cette forme directe de l'établissement de l'impôt pour lui donner une forme indirecte, c'est renverser un ordre naturel. . . . Le nom impôt indirect annonce qu'il n'est point supporté par ceux sur lesquels il semble être directement établi; lors même qu'il parait totalement étranger aux propriétaires fonciers, il retombe sur eux,

An eminent French writer, M. Leroy-Beaulieu, has fallen into a curious error. The Physiocrats, according to him, held that even if the single tax were imposed the landowners would lose nothing because their products would rise in price, and thus reimburse the proprietors for their outlay.[1] This is absolutely erroneous. The cardinal doctrine of the Physiocrats was that all taxes fell ultimately on the landowners, and on them alone. It was just because they supposed the tax could not be shifted that they advocated the single tax.[2]

III.—The Absolute Theory.

A celebrated group of writers on incidence of taxation hold to what we may call the absolute theory of incidence. Foremost among these is Ricardo. Ricardo's Principles of Taxation consists almost exclusively of an investigation into the question of incidence. It discloses here the same merits and the same defects which are so characteristic of all his work. On the one hand profound and acute analysis, with a

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et à grands frais, (Daire's ed. pp. 474, 476, 480); Turgot, "Mémoire" [written for Franklin] "Aucune forme ne peut empêcher le poids de l'impôt de retomber en totalité sur les propriétaires des terres". "Oeuvres" (Daire's ed.) I, 412.

[1] Leroy-Beaulieu, "Science des Finances," 3rd ed., I (1883), 199.

[2] "Tout impôt est payé par le produit des terres, tout ce que l'impôt prend sur ce produit, après le partage fait par le souverain, forme un double emploi; tout double emploi retombe sur les propriétaires fonciers". Mercier de la Rivière, "L'Ordre Naturelle," etc. Chap. vii. (p. 504 of Daire's edition.) *Cf.* Turgot, "Explications sur l'effet de l'impôt indirect": "Tous les impôts sous quelque forme qu'ils soient perçus retombent nécessairement à la charge des propriétaires des biens fonds, et sont toujours en dernière analyse payés par eux seuls, ou directement, ou indirectement. "Oeuvres" (Daire's ed.) I, 416.

marvellous power of isolating the phenomena and treating them as unaffected by disturbing causes; on the other hand the implication that the hypothetical case is a real case, the inference that the formulae deduced with mathematical accuracy and logical rigor from the assumed premises represent the actual economic facts ;—this constitutes at once the strength and the weakness of the Ricardian theories. In order, however, to understand Ricardo, it will be necessary to say a word about Adam Smith.

Adam Smith bases his investigation on the division of all revenue into rent, profits and wages. All taxes on land, whether proportional to the rent or to the produce, are declared to be in reality taxes on rent. And although they may be originally advanced by the tenant, they are always finally paid by the landlord. A tax on land rent always falls on the owner, for the "farmer computes, as well as he can, what the value of the [tax] is, one year with another, likely to amount to, and he makes a proportionable abatement in the rent which he agrees to pay to the landlord." The farmer must have his reasonable profit as well as every other dealer. Hence "the more he is obliged to pay in the way of tax, the less he can afford to pay in the way of rent."[1] The case of a tax on house-rent is slightly different, because house rent is really distinguishable into two separate ingredients, building rent and ground rent. The tax on ground rent, like that on the rent of land, will inevitably fall on the owner, because "the more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground."[2] But that part of the rent

[1] "Wealth of Nations." Book V, Chap. ii. Rogers' ed. II, 417, 428.
[2] *Ibid.* II, 437, 450.

which represents the building rent is simply the profits of the capital expended in building the house. And this part will necessarily fall on the occupier because unless the builder secures the same return on his capital as other business men do, he will cease building houses until the increased demand for houses again raises the rent,—that is, in this case, his profits,—to the general level. A tax on house rent will therefore fall partly on the owner, partly on the occupier, but "in what proportion this final payment would be divided between them, it is not perhaps very easy to ascertain."[1]

Taxes on profits are simple of analysis. The profit arising from stock is divided by Smith into two parts, that which pays the interest, and the surplus over and above the interest. A tax on the surplus above interest is always shifted, because this surplus is the "compensation for the risk and trouble of employing the stock", which the employer must have if he desires to continue the employment. And it will be shifted either on the landowner or on the consumer, according as the stock is employed in farming or in mercantile business.[2] For if he employed it as "farming stock" he could raise the rate of his profit only by reducing the amount he is called upon to pay to the landlord, that is, the rent. But if he employed it as a "mercantile or manufacturing stock", he could raise the rate of his profit only by raising the price of his goods.

A tax on interest—that is on what Smith regards as "the net produce which remains after completely compensating the whole risk and trouble of employ-

[1] *Ibid.* II, 434.
[2] *Ibid.* II, 440.

ing the stock"—seems to fall entirely on the owner, just as in the case of a tax on rent. But in reality the interest on money is a much less proper subject of direct taxation than rent, because land is tangible and easily ascertainable while capital stock is not; and because land cannot be removed while stock easily may. To tax stock, therefore, would cause its removal from the country, and put an end to all the industry which it had maintained, and thus reduce not only the profits of stock, but also the rent of land and the wages of labor. A general tax on profits hence affects other classes besides the employer.[1] A tax on the profits of stock employed in any particular branch of trade will, however, always be shifted from the dealers to the consumers because the dealers must "in all ordinary cases have their reasonable profit." The consumers will have to pay in the enhanced price of their goods not only the tax advanced by the dealer, but generally some overcharge in addition.[2]

Taxes on wages, finally, are always shifted. This is due to the fact that the rate of wages is necessarily regulated by the demand for labor and the average price of food. When these remain the same a direct tax on wages "can have no other effect than to raise them somewhat higher than the tax." If the laborers were engaged in "manufacting labor," the employer would have to raise wages, but would be obliged to charge it ultimately with a profit on the consumers. If the laborers were engaged in husbandry, the farmer would in the long run pay less rent to the landlord.

[1] *Ibid.* II, 443: "The proprietor of stock is properly a citizen of the world and is not necessarily attached to any particular country."
[2] *Ibid.* II, 446.

But both the reduction of the rent and the rise of price will be greater than the amount of the tax.[1] Whenever taxes on labor have not produced a proportionate rise of wages, it is because they have led to a fall in the demand for labor. But the only results of this have been a "declension of industry, a decrease of employment, and a diminution of the annual produce of the land and labor of the country." Even then, however, wages must always be higher than they would otherwise have been,—and this increase of price must be finally paid by the consumers. The same argument holds good of the "recompense of ingenious artists and of men of liberal professions". But it does not apply so completely to "the emoluments of offices" because these are not regulated by the free competition of the market.

Finally Smith discusses taxes which are intended to "fall indifferently on every species of revenue." These are capitation taxes and taxes on consumable commodities. Capitation taxes in so far as they are levied on the lower classes are taxes on wages and subject to the same objections. They are shifted to the consumers.[2] Taxes on commodities are either on necessaries or on luxuries. Taxes on necessaries raise the rate of wages (because wages are fixed partly by the price of necessaries) and fall on the consumers or landlords, acting precisely like a tax on labor. Taxes on luxuries on the other hand will not raise wages but will fall only on the consumers of the particular commodities. In so far as the poor are concerned they act simply as sumptuary laws. It is therefore always to the interest of the richer classes

[1] *Ibid.* II, 461.
[2] *Ibid.* II, 466.

to oppose taxes on necessaries, for all taxes on necessaries are ultimately paid by them, while taxes on luxuries fall on them only in so far as they are consumers of the luxuries.[1]

If we sum up Adam Smith's doctrine of incidence we see that taxes on wages, taxes on profits (except the tax on interest) and taxes on necessaries are always shifted. On the other hand taxes on land and taxes on luxuries always stay where they are put. The classes of society who bear all the taxes are thus above all the landowners, the rich consumers, and to a certain extent the lenders of capital.

Adam Smith's exposition, marked as it is by many profound and suggestive ideas, is entirely dependent upon his peculiar theories of rent, profits and wages. As soon as we deny the validity of his theory of rent, of his treatment of wages as based on the necessaries of life, or of his conception of ordinary profits, his whole doctrine of incidence falls to the ground. And modern economic theory no longer accepts those bases of his theory. Ricardo himself did much to overthrow them. But in so far as Adam Smith based his doctrine of incidence on the theory of free competition without any qualifications and on the inevitable action of his simple economic causes, he may be termed in some sort the forerunner of the absolute theory of incidence.

Ricardo also does not give us any general theory of incidence. As with Smith we must seek his views in connection with the discussion of the separate taxes. Ricardo differs from Smith in his theories of rent and of the relation of profits to wages. Ricardo's theory of economic rent leads him to deny Smith's

[1] *Ibid.* II, 470.

doctrine of the ultimate incidence of land taxes on the landowner. A tax on rent, it is true, will fall wholly on the landlord because, since rent is the surplus above the cost of production, the value of the product cannot possibly be affected by the tax.[1] But it is quite different with taxes on produce, tithes, or land taxes. These will be shifted by the landowners to the consumers. For since price is fixed by the cost of production on land of the poorest quality, whatever increases cost raises price. But a tax which is imposed on all cultivators necessarily increases cost of production. Hence a tax on produce raises price and is shifted to the consumers. A rise of price is the only means by which the cultivator can pay the tax and continue to derive "the usual and general profits" from the employment of his capital. He can not deduct the tax from his rent, for there is no rent on the land which fixes price. He will not deduct it from his profits, because there is no reason why he should stay in an employment with smaller profits. He can therefore pay the tax only by increasing the price.[2]

All land taxes, therefore, except the tax on pure rent, will fall on the consumers. But although every one is a consumer, not all consumers will pay the tax. One large class will remain exempt—the laborers. For a tax on raw produce, like any tax which increases the price of necessaries of life, will inevitably raise wages. "Wages never continue much above that rate which nature and habit demand for the sup-

[1] Ricardo, "Principles of Political Economy and Taxation," Chap. x. (McCulloch's edition, 1876) p. 102. "A tax on rent would affect rent only; it would fall wholly on landlords, and could not be shifted to any class of consumers."

[2] *Ibid.* Chap. ix, p. 91; and Chap. xi, p. 104.

port of the labourer''. But as wages rose, profits would fall. A land tax would therefore fall not on the landlord nor the stockholders, but on the capitalist employer of labor.[1]

The question still remains whether the employer could shift the tax. In other words: what is the incidence of a tax on profits? Ricardo agrees with Smith in holding that a tax on the profits of a particular class will inevitably be shifted to the consumers through a rise of price. But in the case of a tax on all profits the problem is less simple. If no attention be paid to foreign trade then a rise of prices would ensue. But since money is a commodity imported from abroad, a rise of prices, if it occurred, could not be permanent. In return for commodities imported the dear goods could not be exported. On the contrary money would be exported until prices had fallen to their former level. The inference is that a tax on profits will be borne not by the consumer but by the producer.[2]

Finally a tax on wages will raise wages. Ricardo here discusses the objections raised by Buchanan to the doctrine of Adam Smith. And he is forced to make the two important concessions that every rise in the price of necessaries does not necessarily raise wages, and that wages are not generally increased

[1] *Ibid.* p. 93. Ricardo seeks to prove that there would not be any considerable interval between the rise in the price of corn and the rise of wages, during which the laborer would suffer. Here, as elsewhere, his conclusions are too absolute, and depend on the wage fund theory.

[2] *Ibid.* Chap. xv, p. 127: "It appears to me absolutely certain that a well regulated tax on profits would ultimately restore commodities, both of home and foreign manufacture, to the same money price which they bore before the tax was imposed." Cf. p. 155. Ricardo reached this position only in the late editions of his work.

by the amount of the tax.[1] But with his characteristic fondness for simple abstractions he goes on to argue as if these concessions did not invalidate his general doctrine. On the assumption then that taxes do raise wages, Ricardo concludes that they inevitably decrease profits.[2] He objects, however, to Adam Smith's contention that the tax will be shifted to the consumers. For since all producers are consumers of each other's goods, every dealer would increase his prices by the increase which he is compelled to pay, and this process would go on indefinitely, which is absurd.[3] Since therefore the tax would rest on profis, it is immaterial whether the taxes be levied on profits or on wages. It is always the profits of stock on which these taxes ultimately fall.

It will be readily seen that these teachings of Ricardo depend entirely on the wage fund theory, on his general doctrine of profits and on the law of eco-

[1] *Ibid.* Chap. xvi, pp. 130, 133: "It must therefore be conceded to Mr. Buchanan that any rise in the price of provisions occasioned by a deficient supply will not necessarily raise the money wages of labor. Taxes so far as they impair the net capital of the country diminish the demand for labor, and therefore it is a probable, but not a necessary, nor a peculiar consequence of a tax on wages, that though wages would rise, they would not rise by a sum precisely equal to the tax". Yet in the very next paragraph he says that he agrees with Adam Smith.

[2] *Ibid.* p. 129: "Taxes on wages will raise wages, and therefore will diminish the rate of the profits of stock. . . . . The only difference between a tax on necessaries and a tax on wages is that the former will necessarily be accompanied by a rise in the price of necessaries but the latter will not. . . . . A tax on wages is wholly a tax on profits, a tax on necessaries is partly a tax on profits and partly a tax on rich consumers".

[3] *Ibid.* p. 135: "If they could all raise the price of their goods so as to remunerate themselves with a profit for the tax: as they are all consumers of each other's commodities, it is obvious that the tax could never be paid; for who would be the contributors if all were compensated"?

nomic rent. They stand or fall with the acceptance or rejection of these doctrines. Two points, however, must be brought prominently forward,—on the one hand the difference between Adam Smith and Ricardo in results, on the other the similarity in methods.

Adam Smith, as we saw, holds that the landowners pay ultimately most of the taxes, bearing as they do all the taxes on land and a great part of the taxes on wages and profits. The "rich consumers" pay a smaller part, and the lenders ot capital a still lesser portion. On the other hand Ricardo maintains that the landowner pays only the taxes on rent proper, but shifts all the other taxes on land. Both Ricardo and Smith agree that wages can never be reached by a tax; but Smith regards the landowners, while Ricardo looks upon the recipients of profits of stock, as the real taxpayers of the country. The one is the advocate of the landed interest, the other of the monied interest.

But while they differ so fundamentally in results they practically agree in methods. What Roscher calls the "magnificent abstractions" of Ricardo are perhaps the more impressive. No allowance is made for conditions or qualifications. The law of competition is assumed as perfect in its operations. The absolute transferability of capital and labor is presupposed. The most far-reaching hypotheses are posited in the innocent belief that they are exemplifications of actual facts. Everything is reduced to its simplest form. The complicated questions of industrial society are treated as more or less plain arithmetical problems. Even though Ricardo's fundamental theory of distribution were correct, his doctrine of incidence would thus be incomplete. It might per-

haps be true so far as it went, but it would even then not go far enough to explain actual phenomena. It fails to notice the practical effects of economic friction. However much we may marvel at his power of analysis we instinctively regard his conclusions with suspicion. Ricardo's doctrine of incidence is premature and inadequate. Because of its rigidity and unyielding abstraction it may be called *par excellence* the absolute theory.

IV.—The Equal Diffusion or Optimistic Theory.

The germ of this doctrine can be found in the renowned Italian economist, Verri. Verri lays down the general principle that every tax naturally tends to bring about an equilibrium because it strikes every one according to his consumption.[1] But the theory was most fully developed in the celebrated book of Canard, which has now become so rare as to justify a somewhat fuller treatment.

Canard expounds his views in a work avowedly written to disprove the Physiocratic theory of incidence. According to him there is not only a natural labor i. e. necessary to sustain existence, but also what he calls acquired labor, as well as superfluous labor, which lay the foundation of all surpluses or rents. There are three rents: *rente foncière,* the result of the fixed labor applied to land or industry; *rente industrielle,*

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[1] Verri, "Meditazione sulla Economia Politica," 1771, XXX. *Cf.* Custodi's collection of "Scrittori Classici Italiani di Economia Politica," Parte Moderna, Tomo XV, 244: "Ogni tributo naturalmente tende a livellarsi uniformemente su tutti gl' individui di uno stato a proporzione delle consumazioni di ciascuno".

[2] F. Canard, "Principes d'Economie Politique." Ouvrage couronné par l' Institut National, 1801.

the result of the *travail appris* in industry, and *rente mobilière,* the result of the *travail superflu* in commerce. The aim of every man is to turn his labor into that particular kind of occupation which will give him the greatest rent or surplus. From this mutual struggle results the system of "equilibrium of advantages", the laws of which are the explanation of all economic phenomena.[1] The balance or equilibrium of these three rents is the foundation of the law of incidence.

All taxes must be paid from one of these three rents, since a tax can never remain on the *travail naturel* which is necessary to existence. All taxes, again, are shifted because they disturb the equilibrium between the rents. Hence it makes no difference how a tax is imposed, whether on rent or on consumption; the incidence will always be the same. For a tax always diminishes the desire or "determination" of the buyer and seller, and no sale will take place until these desires are equalized by each party assuming one-half of the tax. This is the "equilibrium of the determination" to exchange. Thus the first step in the shifting of taxes is like this:

Total tax—T	$\left\{ \frac{1}{2} \right.$ T	is share of 1st seller.
Share of 1st buyer is	$\left. \frac{1}{2} \right\}$ T $\left\{ \frac{1}{4} \right.$ T	" " 2nd "
" " 2nd " "	...... $\left. \frac{1}{4} \right\}$ T $\left\{ \frac{1}{8} \right.$ T......	" " 3rd "
" " 3rd " "	.... $\left. \frac{1}{8} \right\}$ T $\left\{ \frac{1}{16} \right.$ T	" " 4th "
" " 4th " "	.... $\left. \frac{1}{16} \right\}$ T etc.	

But of course this is only the first step. The first seller will immediately see that he is bearing one-half of the tax, while only one-quarter rests on the buyer. He will perceive that the buyer's "determination" to exchange is stronger than his. He will hence refuse to sell. But if the buyer assumes an

[1] "L'équilibre des rentes", *Ibid.* pp. 10–12.

additional share of the tax, as he well can, the buyer will for the same reasons shift a part of the tax to the next seller, and so on. There will be no equilibrium until each bears an equal share.

To understand how the burden of the tax is distributed between buyer and seller, Canard likens the system of circulation of goods to a series of communicating tubes. No matter how much water we pour in or out of any one tube, every one of the other tubes will gain or lose until the level is again reached in all. Just as the water will seek its level by distributing itself proportionally to the diameter of each tube, so every tax will be distributed equally between buyers and sellers according to their capacity of labor.[1] Hence it is utterly useless for economists to devise schemes for taxing forms of business which seem not to be hit by any existing tax. It is utterly futile for the banker or merchant to hide his books. For the taxation of one branch of industry is like the operation of cupping. The vein from which the surgeon has taken the blood is not more bloodless after the operation than any of the other veins in the body. So it is with the profits which a tax on any branch of industry diminishes; the profits of all other branches flow in at once, until the equilibrium is

[1] "Pour concevoir comment l' impôt se répartit sur tous les acheteurs-vendeurs, imaginons une suite de tubes se communicant entre eux; si dans l'un d'eux on verse un liquide quelconque il s'écoulera successivement dans tous les tubes, et l'écoulement cessera lorsqu'il y sera de niveau. Alors le liquide sera réparti dans tous les tubes proportionellement à leur diamètre, de même que l'impôt est réparti sur tous les acheteurs-vendeurs proportionellement à la capacité de leur travail". *Ibid.* p. 61. *Cf.* p. 233: "Les lois d'équilibre dans le système général de la circulation sont les mêmes que les lois de l'équilibre des fluides".

restored.[1] It may be said, in fact, that the burden of the tax finally disappears and that the tax is ultimately borne by no one at all.[2]

However, Canard confesses that it takes some time for this equilibrium to be realized. There will be many contests between buyers and sellers, and many difficulties in the way. These difficulties he calls the "friction of taxation".[3] During this period even the "natural labor" or the wages of the ordinary laborer may be affected by the tax. Moreover this period of friction produces serious fluctuations which throw all business into confusion until the equilibrium is again reached. It is not so much the tax which causes the trouble, as the derangement of the equi-

[1] "C'est donc bien vainement que les économistes s'épuisent en moyens pour chercher à atteindre par l'impôt les branches qui lui paraissent inaccessibles. L'impôt que l'on perçoit sur une branche d'industrie ressemble à la saignée que le chirurgien fait au bras: la veine qu'il a piquée n'est pas plus appauvrie du sang après l'opération que toutes les autres parties du corps. Il en est de même du gain que l'impôt soutire d'une branche; le gain des autres branches vient tout à coup y affluer pour rétablir l'équilibre." *Ibid.* pp. 168-169.

[2] "On peut dire à la rigueur que la charge de l'impôt finit par être tout à fait nulle, et n'est supportée par aucun individu". *Ibid.* p. 178. In another passage Canard pictures the process as follows: "Ainsi, voici la marche que suit la charge de l'impôt. 1° elle s'écoule d'abord de celui qui le paie le premier sur tous les autres acheteurs-vendeurs et consommateurs de la même branche. 2° De là elle se répand de proche en proche sur toutes les autres branches, par la nouvelle concurrence qu'apportent ceux qui quittent les branches imposeés, pour attacher a celles qui ne le sont pas. 3° Enfin cet excés de concurrence va se perdre dans la branche immense de l'effort politique alimentée par l'impôt, et dont la consommation dédommage les autres branches de la diminution de la consommation superflue qui en résulte. Alors la charge de l'impôt est entièrement de niveau, alors elle n'est plus sentie". *Ibid.* p. 180.

[3] "Cette difficulté c'est ce que j'appellerai le frottement de l'impôt", p. 181.

librium. Hence, concludes Canard, we may advance this great truth: "Every old tax is good, every new tax is bad".[1] A government which has not a fixed, invariable system of taxation is like the planter who is continually changing his methods, but whose land in the mean time produces nothing until the owner himself is ruined.[2] Every tax becomes good provided it lasts long enough.[3] But curiously enough Canard's practical solution of the problem is found in the proposal to replace all existing taxes by a tax on salt.

The theory of Canard was accepted by several writers, notably by Courcelle-Seneuil and Cherbuliez in France and by Prittwitz in Germany. Courcelle-Seneuil tells us that old taxes act exactly like climatic or agricultural disadvantages. The whole community is poorer than it would be if these disadvantages did not exist, but the disadvantages are spread over the whole community.[4] Cherbuliez expresses the

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[1] "On voit donc que ce n'est pas l'impôt par lui même qui fait le mal, mais seulement le dérangement de l'équilibre qu' il cause. Donc on peut avancer cette grande vérité, *que tout vieil impôt est bon, et tout nouvel impôt est mauvais*". *Ibid.* p. 197.

[2] "Le gouvernement qui n'a pas une manière fixe et invariable d'impositions ressemble à un propriétaire qui après avoir fait une plantation s'en dégoûte, la change pour une autre et celle-ci pour une autre encore; pendant ce temps la terre ne produit rien, et le propriétaire se ruine".

[3] "Tout impôt ne devient bon que par sa vétusté". *Ibid.* p. 233. *Cf.* p. 202.

[4] "Lorsque les impôts ont reçu la sanction du temps, ils ne touchent plus a la propriété d'aucun individu en particulier, parceque chacun a arrangé sa vie en vue de son existence. Ils agissent alors exactement comme les inconvénients du climat et du sol: la société en général est moins riche que si ces inconvénients n'existaient pas; mais cette diminution de richesse se trouve repartie de telle façon que toutes les forces mécaniques sont dans leur équilibre naturel". Courcelle-Seneuil, "Traité d'Economie Politique," I. 462 (2nd edition, 1867. The first edition appeared in 1857.)

same idea, but in somewhat modified form, in saying that stability is the best, as mobility is the worst, quality of a tax system. All taxes, no matter how bad at first, gradually become good.[1]

The theory reached its final stage in the German writer Prittwitz who maintained that the only way to secure a just and equitable distribution of taxes was through a permanent, immutable system, and that this would be equally true even though the system was at its inception the most absurd and burdensome imaginable.[2] It is for this reason that I have termed the theory the "optimistic" theory.

The writer, however, who may be said to share with Canard the doubtful honor of founding the optimistic theory is Thiers. Thiers wrote quite independently of Canard, and he is of especial importance as being the inventor of the term "diffusion" of taxes,—a term which he borrows from the science of optics. He compares the shifting of taxes to the diffusion of the rays of light, and lays down his principle in the following words: "Taxes are shifted indefinitely and tend to become a part of price of commodities, to such an extent that every one bears his share, not in proportion to what he pays to the state but in propor-

[1] "La stabilité est le mérite le plus essentiel, la mobilité le plus grave défaut qui puisse avoir un régime pratique de fiscalité. Tout système d'impôt, quelque vicieux qu'il puisse être en théorie, au point de vue de la répartition, va s'améliorant en pratique avec les années, à mésure que les effêts immédiats du prélèvement sont amortis et successivement effacés par l'action toujours graduelle, souvent très lente, mais invariable et certaine, des lois qui gouvernent la vie économique des sociétés". Cherbuliez, "Précis de la Science Economique," 1862, II, 457.

[2] "Denkbar abenteuerlichste und drückendste" are the words used by Prittwitz. Cf. his Kunst, reich zu werden (n. d.), 635–655, and his "Theorie der Steuern und Zölle," 1842, 107–116, etc. etc.

tion to what he consumes".[1] The arguments with which Thiers supports his theorem are as follows: The manufacturer who pays taxes, whether direct or indirect, adds the tax to the price of the commodity, for, consciously or not, he necessarily fixes the price so as to recompense him for all his outlays plus a certain profit. Otherwise he would quit the business. The tax is simply a part of the cost of production. This is true not only of the manufacturer, but of the farmer. If he is to remain in the occupation of agriculture, all his outlays must be made good. And so again the laborer is precisely in the same situation. For unless his wages increase by the amount of the tax he would change his occupation or die of hunger. Thus all taxes are indefinitely shifted.

When we remember that Thiers' whole work was written simply to prove the divine and absolute rights of private property we need not feel surprised at his conclusions. For he tells us that according to this most wise and reassuring law of providence, no matter what the government may do, it is always the rich who pay most of the taxes, because they consume the most.[2] To the socialists he says: hands off, do you not see that the rich already pay most of the taxes? To the radicals who wish to restrict the province of indirect taxes because they bear heavily

[1] A. Thiers, "De la Propriété," 1848, p. 380: "L'impôt se répartit à l'infini, et tend à se confondre avec le prix des choses au point que chacun en supporte sa part, non en raison de ce qu'il paye à l'Etat mais en raison de ce qu'il consomme." *Cf.* p. 382: "L'impôt se répercute à l'infini, et de répercussion en répercussion devient en définitive partie intégrante du prix des choses. C'est ce qui j'appelle la diffusion de l'impôt."

[2] *Ibid.* p. 389: "Par une loi des plus sages, des plus rassurantes de la Providence, de quelque facon que s'y prennent les gouvernements, le riche est après tout le plus soumis a l'impôt".

on the poor he says: stop, that is not true, the rich already pay more than their share.

The logical conclusion of what Thiers calls this "rigorously true" theory of incidence would undoubtedly be that it makes no difference what system of taxation is adopted. "God forbid that I should maintain such a heresy",[1] cries Thiers, much to our surprise.

He demands in the first place equality of taxation, but without attempting to show in what this equality consists. Secondly he makes the important concession that although the tax is ultimately shifted, for the time being it is a burden on the first payer. But he at once complacently ignores these concessions and maintains that in the long run, no matter what the government does, it is always the rich who pay the taxes.

It is to be noticed that this exceedingly shallow doctrine of Thiers met with almost no success in France, where de Broglie is about the only writer who has adopted it, in speaking of the "indefinite repercussion" of taxes.[2] It is remarkable, however, that it should have found adherents in other countries. The most noteworthy modern follower of Thiers is the Austrian professor, Stein, who goes so far as to declare the whole doctrine of shifting to be the result of a "marvellous confusion of thought". For according to Stein every tax is shifted by everybody on everybody, since everybody only advances the tax for somebody else who uses his productions. According to this theory there would naturally be no need of a science of taxation at all. In place of the

[1] "Dieu me préserve de soutenir une pareille hérésie".

[2] De Broglie, "Le libre échange et l'impôt," 48.

"confused doctrine" of shifting of taxes Stein advanced the "simple idea of the production of taxes", the idea namely, that "the total amount of all taxes must be really produced every year as the surplus of production".[1]

Although this conception may be very "simple" to Stein, it must be said that even all subsequent German writers have been unable to understand what it means, and that we may therefore be excused from attempting to unravel the mystery.

In England the equal diffusion theory was virtually advanced already in the eighteenth century by Lord Mansfield. "I hold it to be true," said he, "that a tax laid in any place is like a pebble falling into and making a circle in a lake, till one circle produces and gives motion to another, and the whole circumference is agitated from the centre".[2] But Mansfield made no further application of the doctrine. Later on Martin summed up the theory in the words: "The public are the persons on whom the taxes fall, no matter how they may be artfully diverged in their

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[1]Stein, "Finanzwissenschaft," 4th ed. (1878), I, 493–497: "Die Lehre von der Uberwälzung der Steuern ist eine der wunderlichsten Begriffsverwirrungen, die es je in der Wissenschaft gegeben hat. . . . Das grosse Resultat ist das jede Steuer von jedem auf jeden überwälzt wird. . . . . An die Stelle der unklaren Ueberwälzung der Steuern tritt der klare Begriff der Production derselben. . . . . Die Gesammtsumme aller Steuern muss alljährlich als Mehrwerth der Production von dem Volke wirklich producirt werden. . . . Das ist der einfache Begriff der Steuerproduction". The most recent attempts to understand, and at the same time combat, Stein are found in the two Dutch works: "Cort van der Linden, Leerboek der Financiën," 1887, §81, pp. 156-162; and Pierson, "Leerboek der Staathuishoudkunde," 1890, II, 448–455.

[2]Speech on taxing the Colonies, 1766, in his "Collected Speeches." Quoted by F. A. Walker, Wages Question, 316.

course".[1] But the chief modern writer who adopted the equal diffusion theory is Gibbon, although he did not draw the logical conclusions. Gibbon states that "all taxes direct or indirect paid by the producers or importers of commodities, and by the dealers therein, ultimately fall upon and are paid by the consumers, by whomsoever such taxes may have been paid to the collectors thereof or into the public chest".[2] Gibbon applies this rule to practically all taxes, for taxes on land are according to him taxes on the produce of the land, and taxes on profits or income taxes fall in the long run also on the consumers.[3]

In America, where there has been but little serious study of taxation, the few writers of prominence are, remarkable to relate, almost all abject followers of Thiers. America may, in fact, claim the honor of being the only country in the world where the doctrine is still upheld. The chief representative of this easy going, complacent doctrine is David A. Wells. Mr. Wells lays down the general principle that "taxes equate and diffuse themselves, and if levied with certainty and uniformity they will, by a diffusion and repercussion, reach and burden all property with unerring certainty and equality. All taxation ultimately and necessarily falls on consumption."[4] The

[1] R. Montgomery Martin, "Taxation of the British Empire," 1833, 245.

[2] Alexander Gibbon, "Taxation, its Nature and Properties," 1851, 18.

[3] *Ibid* 19, 26, 33.

[4] Article "Taxation" in Lalor's "Cyclopaedia of Political Science," III, 88. The editor of this Cyclopaedia makes the remarkable statement: "Mr. Wells' views are in harmony with those of Adam Smith, Ricardo, James Mill, Thiers, McCulloch and Say". A most delightful jumble!—*Cf.* another statement of Mr. Wells' theory in the second report of the New York Tax Commission, 1872, p. 47, where he quotes Thiers approvingly.

same opinion has been advanced by Isaac Sherman in the statement that "all proportional contributions to the state from direct competitors are diffused upon things and persons by a uniformity as manifest as is the pressure upon water which is known to be uniform in all directions".[1] Even Judge Cooley is not entirely free from a share in this opinion.[2]

President Walker is the only American writer who has questioned the truth of the optimistic theory.[3] But he seems to overlook the fact that this is only one among many theories of incidence, and that the problem of shifting cannot be solved simply by a negation of the equal diffusion doctrine.

The optimistic theory is so very superficial as scarcely to deserve a refutation. It has never been accepted by any writers of importance except the few already mentioned; and the weakness in the logic has been shown a hundred times. It is needless to repeat these arguments here as our review of the eclectic theories as well as the whole positive and constructive part of the present monograph will substantially show the shallowness of the doctrine in every particular case. Were the theory true, there would be no need for any investigation like the present.

V.—The Pessimistic Theory.

The pessimistic theory like the optimistic theory is also based on the doctrine of diffusion, but draws entirely different conclusions. Its chief apostle is

[1]Sherman, "Exclusive Taxation of Real Estate and the Franchises of a few specified moneyed Corporations," 1874.

[2]Cooley, "A Treatise on the Law of Taxation." (2nd ed. 1886) p. 38.

[3]Walker, "Political Economy," 3rd ed., 1888, §§ 606–610.

the great anarchist, Proudhon. According to Proudhon all taxes are in last resort taxes on the consumer. Try as the legislature may, he cannot prevent this shifting. The whole distinction between direct and indirect taxes is useless. The result must always be "fiscal nonsense".[1] For since the mass of the consumers are the poor, all taxes are unjust because they inevitably press on the poor more than on the rich. This constitutes the inevitable iniquity of taxation.[2] Taxation is necessary and yet taxation is necessarily iniquitous. This is one of Proudhon's famous "contradictions économiques". "The problem of taxation is hence insoluble. The fault lies neither with the principle of proportion, nor with the revolution, nor with the government; neither with ideas nor with men; the fault is to be found in the institutions, which themselves depend on the nature of things".

Proudhon's pessimism is as superficial as Thiers' optimism. Each contents itself with words instead of arguments. And yet, however widely they diverge in practical results, the theories are virtually at one in that, according to each, it really makes no difference what sort of taxes are imposed. With such

[1] "En resumé, de quelque manière qu'on s'y prenne avec l'impôt, on obtient zéro de résultat. C'est toujours la consommation qui le paye . . . . Voici qui met le comble à la déraison fiscale. En dernière analyse l'impôt est acquitté par la masse." Proudhon, "Théorie de l'Impôt." New edition, 1868, "Oeuvres complètes," XV, 206, 166.

[2] L'iniquité de l'impôt ne vient donc pas de lui, elle a son principe dans ces transformations engrenées, dans cette oscillation universelle, dans ces inéqualités organiques, qui sans cesse, par leur agitation incoercible, rejettent sur le produit, et conséquemment sur la masse des consommations, ce que l'impot s'était efforcé de répartir entre les propriétés, les maisons, les industries, les capitaux, les loyers, etc. . . . . *Ibid.* 222.

theories as these the whole science of finance becomes a needless piece of jugglery and mystification.

A recent American writer, Albert S. Bolles, may also be regarded as an advocate of the pessimistic theory, although he would probably resent any statement that he had been influenced by Proudhon. In fact he bases his pessimism on the uncertainty of the process of shifting. According to Mr. Bolles "no uniform law or rule prevails or can possibly be established with respect to the transfer [of taxes]" . . . . "A tax which is fairly assessed on all property in the beginning proves a highly unjust tax in its operation. . . . . Some are obliged to bear the whole burden, they can shift no part of it; others are more fortunate and shift a portion; others are engaged in such a business, or happily are owners of such property, that they can shift the whole, or nearly the whole burden". The whole system thus results in the greatest inequalities.[1]

It is true that Mr. Bolles applies his doctrine only to the general property tax. But the reasoning is equally applicable to other taxes. For in the matter of incidence there is very little difference, as we shall see later on, between a tax on property and a tax on profits; and almost all taxes may be declared to be in the wider sense of the term taxes on profits. If it is true that an equal tax always results in gross inequalities, the outlook for just taxation would indeed be poor. But, as we shall see, it is an exaggeration to say that "uniform rules cannot be established." Pessimism we shall find to be as untenable as optimism.

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[1] Report of A. S. Bolles in Report of the Revenue Commission appointed by the act of the Legislature of Pennsylvania, May 25, 1889, (1890), 142.

VI.—The Capitalization or Amortization Theory.

The origin of this theory is connected with the discussion of the land tax. It can be traced far back to the beginning of the century. The theory is that since the land tax falls exclusively on the landowner —at least according to the opinion of the economists concerned—the effect of the tax will be to depreciate the value of the land by the capitalized value of the tax. That is, since the value of land is fixed by the net produce from the land, the tax which will operate to decrease this net produce will diminish the value of the land by an amount equal to the capitalized value of the tax. The individual who purchases this land will pay for it only this diminished value, and will therefore be free of taxes, since he has discounted the tax in the smaller price paid for the land. The tax, in other words, has become a perpetual rent-charge, allowance for which is made in any transfer of the property. The conclusion drawn from this argument is that a tax on land, after its first imposition, is borne by no one, since it is paid once and for all and is then immediately shifted off in a capitalization of the tax; and that it is therefore entirely immaterial how low or high the rate may be, provided it be constant. This is known as the capitalization or amortization theory, according as we look to the increase or the diminution of the capital value. Applied especially to land it is also known as the rent charge theory, because the taxes are assumed to cease to be taxes on the owner and to become rent charges in favor of the state.

The germ of the doctrine may be found in an author hitherto singularly neglected, the only English

writer to devote a separate volume to the questions of public finance, John Craig. Craig tells us that the tax is "altogether paid by the present proprietors to the entire exemption of future purchasers", making use of the argument advanced above.[1] But Craig hedges his exposition with an important condition, to be discussed in a moment, inattention to which has led succeeding authors to very absurd results.

Some of the early German writers on public finance, like Sartorius, Hoffmann, and Murhard, went so far as to declare that a land tax was therefore no tax at all, but that, since it acts as a rent charge capitalized in the decreased value of the land,[2] it would be virtually a confiscation of the property of the original owner. On the other hand since the future possessors would otherwise go scot free, it would be necessary to levy some other kind of a tax on them.[3]

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[1]Craig, "Elements of Political Science," 1814, Vol. III., 38: "As the free rent of land will be diminished by the tax, the price of each estate will proportionally decline. If the nett rent be reduced by a tax of 4 sh. in the pound, from £100 to £80 a year, the estate which was formerly worth £3,000 will no longer sell for more than £2,400. A proprietor therefore who wishes to dispose of his land, will at once be deprived of one-fifth of his property. Instead of paying £20 a year during his possession, and leaving his annual payment as a burden on the lands, he finds himself obliged to pay £600, the value of the tax, forever, while his successor is exempted from all contribution".

[2]The Germans call the rent charge theory "Die Reallast-theorie der Grundsteuer".

[3]"Alle und jede fixirte Grundsteuern müssen sonach im Fortgange der Zeit und im Verkehre mit Grundstücken die Natur der Steuern gänzlich verlieren, und sich in Staatsrenten verwandlen". Murhard, "Theorie und Politik der Besteuerung," 1834, 295; *Cf.* p. 327. For the necessity of laying new taxes on future holders see *Ibid.* p. 366. *Cf.* Hoffmann, "Die Lehre von den Steuern," 1840, 110; Sartorius, Ueber die gleiche Besteuerung des Königsreichs Hanover, 92; v. Prittwitz, Theorie der Steuern und Zölle, 1842, 132.

In France we find the theory already in part expressed by J. B. Say, although he did not draw the same conclusions.[1] But the doctrine is most clearly expounded in the work of Destutt de Tracy, who made the "singular and important observation" that when a tax is laid on land, a value equal to the capital of the tax is at once taken from the actual proprietors, and that when all have changed owners, it is really no longer paid by any one. But it is remarkable that Tracy applied his doctrine also to taxes on houses and annuities.[2] Several decades later the capitalization theory was most elaborately defended by Passy, who has often, but erroneously, been deemed the real founder of the doctrine. He drew the logical conclusion that the rate of the tax must never be changed. To increase it would be to confiscate the property, to reduce it would be to make a free gift of the capitalized value of the tax to the landowner.[3]

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[1]Say. "Traité d'Economie Politique," 1802, Book III, Chap. X, (8th ed. 1876, p. 565): "Le propriétaire ne peut, même par la vente de son fonds, se soustraire au fardeau de l'impôt: car le fonds n'est payé en principal qu'en proportion de ce que l'impôt lui laisse valoir en revenu. . . . . C'est comme si le gouvernement prenait un cinquième de la terre". In a work subsequently published by Craig, "Remarks on some Fundamental Doctrines of Political Economy," 1821, he calls attention to the fact that Say entertained many of his views, although neither had seen the work of the other.

[2]Destutt de Tracy, "Traité d'Economie Politique," 1815, Chap. xii. *Cf.* the American translation by Thomas Jefferson, Georgetown, D. C., 1817, 207-210.

[3]"Une rémarque essentielle, en ce qui concerne l'impôt territorial, c'est qu'il finit par ne plus être constitué à titre véritablement onéreux pour ceux qui l'acquittent. Cet effêt résulte des transmissions dont la terre est l'objet. . . . On ne peut élever le taux de l'impôt sans râvir aux propriétaires non seulement une portion des revenus dont ils jouissent, mais encore du capital même du nouveau tribut annuel mis à leur charge. On ne peut, au contraire, abaisser ce taux sans leur faire don d'une rente appartenant a l'état, et en

The doctrine in France is generally known as the theory of the immutability of the land tax (théorie de la fixité de l'impôt). And it has been accepted by several other French economists. Thus Garnier maintains that a tax on land is really an expropriation of the original owner to the manifest advantage of the future proprietors.[1] We find the same ideas in Wolowski, Du Puynode, Cherbuliez and Walras.[2] Even Leroy-Beaulieu, although he terms it a "remarkably ingenious theory, with all the appearance of great scientific precision", simply objects that it is "much too absolute"; without going to the pith of the matter.[3] The doctrine itself probably reached its final stage in the statement of Stein that this question is the most important in the whole domain of taxation, and that the land tax must never be increased.[4] Parieu, who was himself not very clear

même temps du capital de cette même rente". H. Passy, Art. Impôt in "Dictionnaire de l'Economie Politique", 1852, 902. — Denis L'Impôt, 1889, 161, errs in ascribing the origin of the doctrine to Passy. Pantaleoni, "Teoria della Traslazione dei Tributi", 1882, 173, seems to make the same mistake.

[1] "Un impôt foncier, quand on l'établit, est une sorte d' expropriation du propriétaire pour une certaine partie de son fonds; mais l'acheteur qui lui succède paye la terre en conséquence et ne subit plus l'impôt". Garnier, "Traité de Finances", 4th ed. (1885), 100, 103.

[2] Wolowski, *Journal des Economistes*, 1866, IV, 141. "Tout accroissement de l'impôt direct sur la propriété ne porte que le nom d'impôt: il est en réalité une confiscation partielle déguisée sous une apparence trompeuse". *Cf.* Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt", 1843, II, 171; Cherbuliez, "Précis de la Science Economique", 1862, II, 437; Walras, "Eléments d'Economie Politique Pure", (2nd ed., 1889), 572, and "Théorie Critique de l'Impôt", 1861, 34.

[3] Leroy-Beaulieu, "Science des Finances", 3rd ed. 1883, I, 319.

[4] "Im Allgemeinen ist nun kein Zweifel, dass eine solche Erhöhung im ganzen Gebiete der Besteuerung die ernsteste und wichtichste Frage ist welche überhaupt hier vorkommen kann. . . . Das allgemeine Princip daher muss sein . . . dass die Grundsteuer

on the subject, shows very well that this doctrine of immutability necessarily leads to the English idea of the redeemable rent charge.[1]

In England the theory has seemed to derive some support from the fact that the land tax is indeed a redeemable rent charge. But that is owing simply to the peculiar circumstances of the case. The land tax which was originally a general property tax[2] came to be considered a fixed and invariable tax of four shillings in the pound. In 1798 it was made perpetual at that rate, and the landowners were given the privilege to redeem it, that is to free the land from taxation by paying a certain lump sum. In England, therefore, the land tax is indeed a redeemable rent charge, but only because expressly made so by statute. This is what led Greg to maintain that the land tax was not a burden upon the land because the state had become a permanent proprietor jointly with the owner of the estate; and led Senior to express the same views in distinguishing between the incidence of a new tax and of a fixed permanent land tax.[3] To draw any general conclusions as to the incidence of taxation in general would be wholly inadmissible. Especially the inference that it is always wrong to impose a new tax or to increase an old tax on land would be utterly unjustifiable.

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niemals erhöht werden darf".—"Lehrbuch der Finanzwissenschaft", 4th ed. (1878), II., 55. In the 5th ed. (188‸) this passage is omitted. *Cf.* II, 103–105.

[1] Parieu, "Traité des Impôts", (2nd ed. 1866), I. 273: "Cette immutabilité n'est que la timide premisse de sa rachetabilité".

[2] See my article on "The General Property Tax." *Political Science Quarterly*, V, No. 1.

[3] Select Committee of House of Lords on the Land Tax, 1846, Qu. 5479–5510.

The truth of the matter simply is that the whole theory applies to the land tax only where the land tax is the sole tax levied. The capitalization theory of incidence is true of the land tax only in so far as it is a partial or exclusive tax. Above all, it is not a whit more applicable to the land tax than to any other tax.

This was already clearly perceived by Craig—a fact that seems to have utterly escaped the attention of succeeding economists. For Craig expressly tells us that his theory holds good only in case "a land tax be imposed without an equivalent duty on every other species of property." He further states that exclusive taxes in general, like exclusive taxes on land, fall ultimately on the present proprietors of that species of property which is taxed.[1] John Stuart Mill practically entertained the same opinion although he did not work out his theory and contented himself with asserting that "a peculiar tax on the income of any class, not balanced by taxes on other classes, is a violation of justice and amounts to a partial confiscation."[2] As to the other English writers, Dudley Baxter discussed the "strange theory" of the rent charge as applied to the land tax, the poor rate, the succession, probate and legacy duties. But although

[1]Craig, "Elements of Political Science," III, 37, 82-86.

[2]Mill, "Principles of Political Economy". Book V, Chap. iii, §2. In another passage he shows that an exclusive tax on "realized property . . . would fall exclusively on those who happened to compose the class when the tax was laid on . . . Future buyers would acquire land and securities at a reduction of the price equivalent to the peculiar tax, which tax they would therefore escape from paying; while the original possessors would remain burthened with it even after parting with the property. . . . Its imposition would thus be tantamount to the confiscation for public uses of a percentage of their property." Book V, Chap. ii, §3.

he professed to discover three fallacies in the argument, none of his objections really goes to the root of the matter.[1] Noble, in his chapter which deals solely with the very broad facts of incidence, mentions the rent charge theory only in connection with the land tax.[2] Sidgwick, who sees that the rent charge theory applies only to a *special* tax on land, limits the doctrine to "any particular kind of durable wealth of which the supply absolutely limited". But he does not make the reasons clear and fails to see the real scope of the theory.[3]

The only French writer, in addition to Destutt de Tracy, who attempted to generalize the conception of the capitalization of incidence, was Cournot. He expounded the theory already at an early period, although in other words. Above all he applied it only to articles subject to the law of monopoly.[4] But even Cournot drew no general conclusions from the theory.

It was reserved for the German economists to set forth the truth in the capitalization theory. The earliest writer to discuss it fully was Rau. Rau shows that the theory is not entirely true of the land

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[1] Dudley Baxter, "The Taxation of the United Kingdom", 1869, 50–55.

[2] Noble, "National Finance", 1875, 282. *Cf.* Noble, the Queen's Taxes, 1870, 146.

[3] Sidgwick, "Principles of Political Economy", 1883, 569.

[4] "On peut même dire que cet impôt [fixed or proportional to net profits] ne fait tort qu'aux premiers possesseurs, aux inventeurs et en général à ceux qui jouissaient du fonds productif au *moment* de l'établissement de l'impôt, et à leur successeurs à titre gratuit. Car les successeurs à titre onéreux règlent leur prix d'acquisition sur le produit net, défalcation faite de l'impôt; et si le fonds vient à être degrèvé entre leurs mains, c'est pour eux une véritable épave". Cournot, "Récherches sur les Principes Mathématiques de la Théorie des Richesses", 1838, 75.

tax, first, because the original owners or their heirs often retain possession, so that there may be no chance for a diminution of the capital value through purchase and sale; and secondly, because the value of land is fixed not alone by the net produce but sometimes by other factors, such as a change in the demand or in the rate of interest. In such a case it cannot be said that the new purchaser does not feel the tax, because it is difficult for him to realize clearly that he paid less for the land on account of the tax. But in so far as the theory is true, it applies only to so much of the land tax as exceeds the usual rate of taxes on other commodities. Above all the same argument is true of every tax levied on objects of varying value capable of sale—whether houses, stocks, bonds, or other capital.[1]

Other writers like Helferich and Hock developed the doctrine,[2] and it has recently been clearly expounded by Schäffle.

Schäffle would naturally enlarge the rent charge theory into a general capitalization theory, because of his doctrine of the universality of the rent principle—the doctrine, which has lately been made familiar to English readers by a number of writers, that the theory of rent is not confined to land but is applicable also to all profits on capital.[3] Since Schäffle the capi-

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[1] Rau, "Grundsätze der Finanzwissenschaft", 5th ed., 1865, II, 22–27.

[2] Helferich, "Ueber die Einführung einer Kapitalsteuer in Baden". In Tübinger *Zeitschrift für die gesammte Staatswissenschaft*, 1846, 291 *et seq;* Hock, "Die öffentlichen Abgaben und Schulden", 1863, III, *et seq.*

[3] Schäffle, "Die Grundsätze der Steuerpolitik und die schwebenden Finanzfragen", 1880, pp. 176, 187, 190. Schäffle's general theory of rent and profits was first published in 1867, in his "Nationalökonomische Theorie der ausschliessenden Absatzverhältnisse." The theory itself

talization theory has been accepted by Pantaleoni[1] in Italy and by Pierson[2] in Holland, but they all fail to notice some of the qualifications which I shall now proceed to mention.

The general theory of capitalization may be expressed as follows: When a partial tax is imposed on any class of commodities to the exclusion of all other classes, whether the commodity consist of land or of any other taxable object, the tax will fall entirely on the original owner of the commodity before the tax was imposed, and not on the future purchaser; because the tax will be discounted in a depreciation of the capital value of the article by a sum about equal to the capitalized value of the annual tax. In the same way when unequal taxes are levied on different classes of commodities, the excess of the tax in the overtaxed commodity over and above the general rate will be capitalized, so as virtually to exempt future owners from their surplus taxation. But this will be true only on the three conditions:

(1) That the tax is levied on a commodity or object which is capable of an annual rental value and which has a capital value;

(2) That the tax cannot be shifted to the consumer by the fact of the commodity being used in further production;

(3) That the general relations of demand and supply remain in other respects the same.

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is already found in Mangoldt, "Die Lehre vom Unternehmergewinn", published in 1855.

[1] Pantaleoni, "Traslazione dei Tributi", 179, who chides Schäffle for not giving credit to Rau. But he forgets that Craig preceded both Rau and Schäffle.

[2] Pierson, "Leerboek der Staatshuishoudkunde", Vol. II, 1890, 391-409: "Amortisatie van Belastingen".

Thus the principle of capitalization would not apply to taxes on income in general or to special taxes on wages, etc., because there is no capital value which is subject to amortization or capitalization. Again, secondly, the principle would not apply if the tax can be shifted to the consumer. For the tax will then simply raise the price of the product, instead of lessening the value of the principal or source of the product. Thus an exclusive tax on commodities may be shifted to the consumer. Capitalization of taxation is just the opposite of shifting of taxation, although they have been frequently confounded. If a tax is shifted it cannot be capitalized; if it is capitalized it cannot be shifted. Capitalization implies a depreciation of the capital value; but this is possible only when the tax rests on the possessor, i. e. when it is not shifted to any one else, like the purchaser or consumer.

Finally, the principle would not apply to special taxes on property or profits if the capital value of this class of commodities should for any other reason fluctuate in price. For example, if a special tax were levied on government securities it might nevertheless happen that for some reason confidence in government bonds as over against general securities might decrease to such an extent as to counterbalance the decreased returns from the investment. In such a case there would be no capitalization of the tax. Thus again, in the case of a special tax on land, the value of land as an investment might increase when compared with other forms of investment. This also would nullify the action of the principle. The doctrine of capitalization holds good only on the assumption that other things are equal. It is based on the

theory of normal cost, or on normal demand and supply. It is only in the absence of disturbing causes, which must be investigated separately in each particular case, that the increase of an exclusive tax results in a partial confiscation, or that its decrease is tantamount to a free gift.

With all these qualifications the capitalization of taxation remains an important topic in the study of incidence. Its cause is inequality; its result is confiscation or gratuity.[1]

VII.—The Eclectic Theory.

The absolute theory as well as the equal diffusion theory soon met with considerable opposition. Most of these opponents, however, have confined themselves to criticism and to the elaboration of a few special points. We may sum them up under the head of the eclectic school.

One of the first authors who attempted to show the weakness of both Canard and Ricardo was J. B. Say. According to Say a tax on any article, when followed by a rise in price, falls on the consumer, but only in part. For increased prices mean diminished consumption, and smaller demand means decrease of profits. So that even here the producer may bear a part of the tax. The tax is like the powder that

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[1] For an application of the general theory to a special tax see my article on "The Taxation of Corporations", *Political Science Quarterly*, Vol. V, esp. 671–674. I may add that the article mentioned was written before I had begun the present investigation, and that I was at the time ignorant of the fact that the general principle had already been discussed by some of the foreign writers.

affects both the ball which it propels and the cannon which it causes to recoil.[1]

Hence a tax never increases price by the full amount of the tax. When the price of the article does not rise, the producer bears the whole tax. But everything depends on the article, whether it is a matter of necessity or luxury. If the tax is levied on raw materials it affects more or less the prices of all other products. Direct taxes on producers again affect consumers very unequally. For there is no such thing as an equality of profits. The producers of some commodities can shift the burden far more easily than others. For the doctrine of transferability of capital is far more true of circulating capital than of fixed capital or land. Moreover Canard's analogy between taxes and the cupping of the arm in its influence on the whole body is misleading. For the wealth of society is not a fluid seeking its own level. It may rather be likened to a tree, an attack on one of whose branches may kill the branch without mortally wounding the tree. The richer the branch, the greater the danger to the whole tree. But an analogy, however good, is not a proof. Hence, concludes Say, it is very rash to affirm that a particular tax falls definitely on a particular class. Taxes fall on those who cannot escape them. But the methods of escape are numberless, and vary with the tax or with the state of the market. Nothing is more uncertain, nothing more variable than the incidence of taxation.[2] The writers of the abstract school reason

[1] "C'est l' effort de la poudre qui agit à la fois sur le boulet qu'elle chasse et sur le canon qu'elle fait reculer". Say, "Traité d'Economie Politique", 1802, Book III, Chap. x, 8th ed. (1876) p. 562.

[2] "On voit combien il est téméraire d' affirmer comme une principe général que tout impôt tombe définitivement sur telle classe de la

on assumptions to which the every-day facts give the lie.

On the other hand Say immediately follows this statement with the assertion that a landowner can *never* shift the tax to the consumers—a statement which seems to be quite as absolute as those against which he directs his arguments. The land tax will remain on the landowner because the tax cannot normally affect the products, and since the supply does not change, the price cannot. But still, Say concludes, it is impossible to lay down any general principles on incidence. In a machine so complicated as that of society taxes are paid in many an elusive form.[1]

Another heated opponent of Ricardo was Sismondi. Sismondi starts out by asserting that in the case of taxes on articles on consumption one can never say beforehand by whom they will be borne, because of the complexity of the conditions of the market. He discusses the "abstractions" of Ricardo, and especially his theories of taxes on raw produce and wages. Sismondi fulminates eloquently against the absolute doctrines of equality of wages and profits and the transferability of labor and capital,—the cornerstones of Ricardo's theory. "What, are the farmers to

société ou telle autre. . . . Les impôts tombent sur ceux qui ne peuvent pas s'y soustraire. . . . . mais les moyens de s'y soustraire varient a l'infini. Rien n'est plus incertain, rien n'est plus variable que les proportions suivant lesquelles les diverses classes de la société supportent l'impôt" *Ibid.* 566. Remarkable to relate, Say has usually been considered by English and American writers as an exponent of the equal diffusion theory. In reality he was one of its chief opponents. President Walker has already called attention to this. "Political Economy", 3rd ed., §608.

[1]Dans une machine sociale un peu compliquée, l'impôt s'acquitte sous bien des formes inapercues. *Ibid.* p. 562, note.

become lawyers or doctors or clockmakers because their wages have been reduced?" asks Sismondi. "Will the laborers with horny hands and robust bodies all leave their fields and shut themselves up in the factories until agricultural wages have again risen? Beware of this dangerous theory of equilibrium. Beware of thinking it a matter of indifference where the burden is put. Beware of believing that if we tax necessaries of life, the poor will shift the burden on to the rich: A certain equilibrium will indeed be attained in the long run,—but after the most frightful sufferings. Before it is established the failures of the merchants who must abandon their industry will have caused the nation more loss than all the revenue from taxation; the misery and suffering of the laborers will have cost the nation more lives than the most destructive wars. These are the terrible methods of re-establishing the equilibrium. It is this that we see when we abandon those abstractions, which ought never to befog a science that deals with the happiness and welfare of men." In such strong language does Sismondi endeavor to combat the theories of the absolute school.[1] But while Sismondi is so heated in his criticism he does not attempt any constructive work, and says that he is unable to discover any general principles.

Another French writer who treated the subject, but in a manner far less profound than some of his successors, is Garnier. Garnier thinks that *in the long run* taxes fall finally on the consumer. But he maintains that there are many limitations which pre-

[1]Simonde de Sismondi, "Nouveaux Principes d'Economie Polittique", 1819, Book VI, Chap. 6. I quote from the second edition (1827) Vol. II, 219-223.

vent the producer from always shifting the burden to the consumer. Above all he denies that the diffusion of taxes leads to an exemption of the taxpayers. "Division, diffusion and repercussion are unfortunately not the synonyms of evaporation."[1]

A far more important writer is Parieu. Parieu's terminology is very confusing. He is continually confounding the words incidence and shifting, and speaks of the direct and indirect incidence, by which he means ultimate incidence. But his matter is far better than his form. Parieu criticizes those who maintain that all taxes are added to the cost of production and thus distributed to the consumers. This is false and much exaggerated, cries Parieu. Otherwise it would not be worth while to write any books on, or devote any thought to, taxation. All taxes would be alike in their results, the choice between them absolutely indifferent. Parieu maintained that it is possible to lay down one or two general principles, which he formulates in this way:

Taxes remain in first instance on the original taxpayer if the taxable commodity is not susceptible of restriction of supply. In proportion as the supply can be diminished, the tax will be shifted to other classes. If the individual on whom the tax has been shifted is in his turn in a position to restrict his enjoyments, he will neutralize in part the effect of

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[1] Garnier, "Traité de Finances", 1858; p. 36 of 4th ed. (1883). Garnier errs, however, in ascribing this theory to Ricardo. It was the theory of Canard and Thiers, not of Ricardo. It is remarkable that Canard has been almost completely neglected by the French writers themselves.

this shifting, and will shift the tax either back to the original tax payer or on to some other classes.[1]

Parieu applies this leading principle to the various kinds of taxes. And there is no doubt that he here strikes the keynote of what may be called the quantitative or mathematical theory which will be discussed later on. What Parieu says is true, as far as it goes, and, rightly interpreted, furnishes a clue to many of the difficulties of the subject. But Parieu himself devoted only a very few pages to the whole topic and made no effort to get beyond more or less vague generalizations. He concludes that as a general rule "the imposition of taxes, except in the case of taxes on commodities levied wholesale on the producer, cannot be regarded as producing a shifting which completely inverts the first natural effects of the tax. In most cases, the whole or greater part of the tax remains on him who pays it actually or ostensibly in the first or second degree of the incidence."[2] But although he did not grasp the whole

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[1] Parieu, "Traité des Impôts." I, 68 (2nd ed. 1866): "L'impôt reste, au moins immédiatement, à la charge de celui qui le paye, si l'objet sur lequel il est assis n'est pas susceptible du réstriction. Il est rejeté en tout ou partie sur d'autres contribuables, si l'objet sur lequel il est assis est susceptible de restriction, et la répercussion de l'impôt est en raison même de la facilité de cette restriction. Si celui sur lequel l'impôt est réflechi est à son tour en état de reserrer la jouissance a l'occasion de laquelle il reçoit le contre-coup de la taxe, il neutralisera en partie l'effêt de la répercussion de l impôt en la rejetant, soit sur le contribuable primitif, soit sur d'autres."

[2] *Ibid.* p. 83 : "L'incidence des taxes ne peut être considerée comme réalisant, si ce n'est pour les denrées frappées en gros chez les producteurs, une réflexion complètement déstructive, des premiers effets naturels de l'imposition. Dans la plupart des cas, tout ou partie de la charge reste réellement imposée sur celui qui la supporte visiblement et ostensiblement dans le premier ou le second degré de son incidence".

subject, and did not even develop his own principle successfully, Parieu deserves more than a passing notice as pointing out one of the most important elements in the solution of the problem.

The other French writers have not materially contributed to the solution of the problem. The work of Du Puynode is very voluminous but not very critical. He makes the whole subject very simple. According to him, taxes on land as well as taxes on houses are ordinarily borne by the owner. "All the imaginary distinctions of Smith and Ricardo are without foundation."[1] Taxes on personal property or profits are always shifted to the consumer. Taxes on wages always rest on the laborer by whom they are paid in first instance.[2] Of course it is very easy to solve the questions in this way.

The volumes of Vignes are important in many other branches of taxation, but his treatment of incidence is not especially noteworthy, except for the fact that he opposes both the theory of "scepticism" and that of "equal diffusion."[3] He deals however, mainly with the special taxes and does not seem well acquainted with the literature. Some of his views are interesting and will be noticed later on.

Finally Leroy-Beaulieu in his comprehensive treatise on public finance rather skims over the general problem. We do, indeed, find a few strong passages scattered through the volume, but only in connection with special points.[4] While admitting that there is

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[1] Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt," 1853, II, 175.

[2] *Ibid.* II, pp. 215, 321, 365.

[3] Vignes, "Traité des Impôts en France", 4th ed. by Vergniaud (1880) II, pp. 68, 97, 118, and 173.

[4] Leroy-Beaulieu, "Traité de la Science des Finances", 3rd ed. (1883) I, pp. 180, 413, and 769–771.

a certain element of truth in the "general repercussion" doctrine, he warns his readers against placing too much reliance on it. For anything constructive we search in vain.

In Germany we find far more noteworthy contributions to the subject. The early German writers on public finance, like Soden, Jakob, Fulda, Malchus, Biersack and Murhard may be passed over as comparatively insignificant. They certainly made no definite impression on the course of the theory.[1] One of the early Germans however must be mentioned because of his prominence in other domains of economic science—Von Thünen.

Von Thünen devotes only a small portion of his remarkable work to the problem of taxation, and discusses principally the incidence of the land tax. But he is worth noticing as showing how the equal diffusion theory, logically developed, results in an absurdity. "It would seem then," he says, "that the state can increase its taxes to any conceivable extent, without harming the community, since every active citizen would bear the tax only nominally if he were simply to advance the tax without paying it in last instance. But this remarkable conclusion" adds Thünen "depends on the assumption that after the imposition of the tax the consumption of commodities remains the same. And that is, of course, the weak point in the theory."[2]

[1] Those who desire to study in detail the views of these rather unimportant writers are referred to the books of Kaizl and Falck who deal especially with the German authors.

[2] Es scheint demnach. . . . . dass der Staat die Abgaben bis aufs äusserste erhöhen könne ohne dadurch das Wohl des Ganzen zu gefährden indem von allen seinen thätigen Bürgern kein Einziger dadurch bedrückt wird, weil Jeder die Abgabe nur vorschiesst,

With Rau, however, we come to some positive results. Rau lays down his conclusions in the seven following principles: 1. A tax can be shifted only when it induces the majority of the taxpayers to a uniform conduct, which brings about a change in supply and demand. 2. A tax assessed on the income of an entire class cannot be easily shifted to the vendors of certain goods, because the restriction of the taxpayers' expenses affects different commodities unequally, so that the slight decrease of the demand will often be counterbalanced by a decrease of the supply. 3. Taxes will be shifted most easily on the consumers when all the sellers see themselves equally forced to make good the tax by decreasing supply, as in the case of customs duties. 4. Taxes on classes with fixed incomes, like public officials, cannot possibly be shifted. 5. Taxes which are not assessed according to the quantity of goods for sale are less easily shifted than others. 6. In taxes on rent, the source of profits, wages or profits the important consideration is whether the tax-payer can escape the tax through a change in investments. 7. The transference of taxation cannot excuse an unjust system of assessment, because (*a*) the shifting is often more apparent than real, (*b*) if only a few taxpayers are assessed too high or too low, prices will not be affected, (*c*) in the interval many hardships are sure to ensue, and (*d*)

nicht selbst bezahlt. . . . . Die Schlüsse wodurch wir dieses sehr auffallende Resultat erhalten, beruhen auf der Voraussetzung dass nach der Einführung der Abgabe die Consumtion dieselbe bleibt". v. Thünen, "Der isolirte Staat". I (3rd ed. 1875), 337. The first edition was published in 1826. *Cf.* the French translation by Laverrière: "Recherches sur l'influence que le prix des grains, la richesse du sol et les impôts exercent sur les systèmes de culture", (1851) p. 292.

even a complete shifting of a high tax is not without bad results because it often diminishes both production and consumption.[1] These principles of Rau are very far removed from the absolute theories of Ricardo, and they are of considerable help in the investigation of special problems, as we shall see later on.

More important, and in some respects the most suggestive of the works hitherto considered, is the book of v. Hock. Hock was the first to analyze and define the various kinds of shiftings—the shifting forwards, the shifting backwards and the shifting off, terms to which allusion is made in the introduction.[2] He maintains that from the standpoint of the taxpayer the tax must always be a part (1) of the cost of production of the commodity taxed, (2) of the general business expenses, (3) of the cost of subsistence, or (4) a burden on the net revenue or income. Examples would be, respectively, a tax on the manufacture of spirits, a license or business tax, a poll or house tax, and an income tax. In general, taxes of class one, class two, and of class three in so far as the necessaries of life are concerned, are virtually additions

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[1] Rau, "Grundsäte der Finanzwissenschaft," 1832; 5th ed. (1864), III, 412–417. The 6th point reads as follows: "Insbesondere kommt es bei Steuern, die den Ertrag einer einzelnen Güterquelle zu treffen bestimmt sind, darauf an, ob der Besteuerte durch eine anderweitige Verwendung jener Quelle oder andere Einrichtungen der Auflage ausweichen kann. Dies wird in vielen Fällen durch die Beschaffenheit des werbenden Vermögens verhindert. . . . . Desshalb bleiben die meisten Steuern auf den Renten des werbenden Vermögens liegen, die auch wirklich den grössten Theil des steuerbaren Einkommens ausmachen, oder werden noch auf sie hinübergewälzt".

[2] He termed these: Fortwälzung, Ruckwälzung and Abwälzung—all of them modes of Ueberwälzung or shifting.

to the cost of production and will thus tend to be shifted to the consumer. But there are many exceptions to the general rule, which may be summed up as follows:[1] (A) There will be no shifting *in general* and *for a long period* when the tax is so high as to produce a decrease of demand, or a substitution of inferior products on the part of the consumer. (B) There will be no shifting *temporarily* when the state of the market changes so that the price of the articles falls below the price before the tax was imposed. (C) The exceptions to the shifting of tax on necessaries of life are far more frequent and dangerous to the laborer, than the above exceptions to the producer. For wages frequently vary, and an increase of price in the necessaries of life joined with a low rate of wages has the most lamentable results.

While Hock, therefore, accepts in general the cost of production theory of taxation, he is by no means a follower of Canard or Thiers. He confesses that in the long run the shifting of some taxes will produce an equilibrium,—only it is not a fixed equilibrium, but one that is continually disturbed by the conditions of the market, and completely overthrown by every important economic reform. Above all it is not to be assumed that this equilibrium is necessarily just or even beneficial from the economic point of view. For under certain conditions the shifting of taxation may increase, and not decrease, the original injustice. The optimistic theory of diffusion is utterly untenable.[2]

[1] Hock, "Die öffentlichen Abgaben and Schulden", 1863, 91-96.

[2] "Es ist allerdings wahr, dass die Uberwälzung der Steuern zulezt eine Ausgleichung zur Folge habe, allein das hierdurch hergestellte Gleichgewicht ist ein labiles, das jeden Augenblick durch die Schwankungen des Marktes gestört und durch jede tiefer greifende wirth-

Prince-Smith seeks to solve the problem in somewhat the same way. Prince-Smith ridicules the diffusion theory which virtually maintains that the burden of taxation, like the ball in the game of shuttlecock and battledoor, is continually thrown from hand to hand, and always remains suspended in the air without ever falling on anybody.[1] On the contrary the shifting of taxation depends on certain conditions. It can take place only through increase of price. But the increase of price can be due only to increased demand or decreased supply. The producer cannot increase the demand. Therefore he must reduce the supply. Apart from the question of outlets in international trade, this is possible only through limitation of production, i. e. transfer of capital and labor to other occupations. The whole problem of shifting thus reduces itself to the question: which is more injurious—to bear the tax without shifting, or to suffer through the limitation of production. In general a tax will be shifted only when the transfer brings in more than it costs. In other words the whole question of incidence is, according to Prince-Smith, simply a question of calculation. He applies his theory to practical cases and thinks that the land and house tax cannot be shifted, that the indirect taxes or taxes on wages can be shifted only through the bankruptcy of the weakest; —and bankruptcy of the laborer means starvation

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schaftliche Reform ganz aufgehoben wird. . . . . Es kann unter gewissen politischen und commerciellen Vorbedingungen die Steuer durch fortgesetzte Ueberwälzungen eben so leicht ungerechter und schädlicher werden als das Gegentheil". *Ibid.* 108-109.

[1] Prince-Smith, "Ueber die Abwälzung", in *Vierteljahrschrift für Volkswirthschaft und Kulturgeschichte*, XIII (1886), 130. Also reprinted in his "Gesammelte Schriften", 1877, I, 43-64.

and death. As a protest against the absolute and diffusion theories Prince-Smith makes a strong case, although some of his own positions are not always tenable.

The most recent German writers on public finance have, with few exceptions, done very little to advance the investigation. Roscher follows in the main the exposition of the English school.[1] Schäffle deals chiefly with the question of capitalization, and has already been referred to.[2] Wagner, even in his last edition, bases his exposition primarily on the works of Rau and Hock, and does not really get beyond them.[3] Cohn contents himself with a few vague generalizations which are of extremely little use.[4] In fact, the recent German literature is significant mainly for the fact that it attempts, sometimes very successfully, to glide over and evade the difficulties of the problem. In so far as any positive views are to be found in the books of Kaizl and Falck mentioned above, they will receive due attention later on.

The English writers who have not yet been mentioned, may be passed over with a few words. Richard Jones was one of the first to deny the Ricardian doctrine of incidence, as he was the first to dispute Ricardo's theory of distribution. He confined himself almost exclusively to the tax on wages or on consumable commodities. Jones maintains that it is impossible to tell beforehand the ultimate incidence of a tax on wages. It depends on their effect upon the movements of population. If the tax be laid on

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[1] Roscher, "Finanzwissenschaft", 1886, §§38-43.
[2] Schäffle, "Steuerpolitik", 1880, 173-192.
[3] Wagner, "Finanzwissenschaft", II, (2nd ed. 1890), 332-372.
[4] Cohn, "Finanzwissenschaft", 1889, 384-311.

wages under circumstances in which it would not affect the movement of population, but would be met by a sacrifice of secondary gratifications the tax would not be shifted. Only in the reverse case would the tax be shifted from wages to profits.[1]

Already before Jones, David Buchanan had controverted some of Adam Smith's doctrines on incidence. He takes exception to the distinction between the ground rent and the building rent in the house tax.[2] But above all he opposes the view that a tax on labor will produce a corresponding rise in wages. If wages were always at the bare minimum point, then indeed the doctrine might be true. But "while the wages of labor affords comforts and even luxuries, the laborer will always possess a fund for the payment of taxes". . . . "All taxes on labor or on such commodities as the laborer consumes take effect by abridging his comforts. They increase the hardships and tend generally to degrade the condition of the laboring classes."[3] And we have seen that the argument of Buchanan induced Ricardo to make a qualification of his rigid theory.[4]

James Mill is, on the whole, a follower of Ricardo, although he makes a distinction in some points. Thus Mill maintains that a tax on rent falls on rent, but a tax on produce or on farmers' profits is shifted to the consumer. So also a tax on profits of stock

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[1] Jones, Tract on the incidence of taxes on commodities that are consumed by the laborer. In "Lectures and Tracts on Political Economy", 1858, 143 and 277.

[2] David Buchanan, Edition of Adam Smith's "Wealth of Nations", III, (2nd ed. 1817), 309.

[3] *Ibid.* 338-339; and Buchanan, "Observations on the Subjects Treated of in Dr. Smith's Inquiry", etc. (2nd ed. 1817), 59-64.

[4] *Supra.*, p. 37.

will fall on profits. On the other hand Mill accedes to Ricardo's theory of the tax on wages only on the assumption that wages are at the lowest point to which they can be reduced. Otherwise, he thinks, a tax on wages will not be shifted to profits.[1]

Senior confines his observations to a few points only. He agrees that taxes on manufactured commodities raise the price, generally by a sum exceeding the amount of the tax. But he takes issue with Ricardo with regard to a tax on agricultural produce. Senior maintains that while the immediate effect of such a land tax is to raise price, its ultimate effect is to diminish the consumption and production of raw produce but to leave its price unaffected. Tithes will therefore not be shifted to the consumers.[2]

John Stuart Mill keeps, in the main lines, to the arguments of his predecessors. He assumes perfectly free competition, and the complete transferability of capital; and on this builds up the whole superstructure. He also follows Ricardo except in three points. In the first place he accepts Senior's emendation of the doctrine of tithes, confessing that in the long run the incidence is on the landowner, and not the consumer. Secondly he accepts the view of his father as to the incidence of a tax on wages. Thirdly he analyzes more closely the incidence of taxes on exports and imports.[3]

McCulloch displays a little more independence only in one point. A special tax on profits will not necessarily raise prices, as Ricardo has said, but may

[1] James Mill, "Elements of Political Economy", (3rd ed. 1844), Chap. iv, Sec. v–xii.

[2] Senior, "Political Economy", (6th ed. 1872), 120–124.

[3] J. S. Mill, "Principles", Bk. V, Chap. iv, §4; Chap. iii. §4 and Chap. iv, §6.

lead to a reduction of cost, instead of being shifted to the consumer. McCulloch points out that the producer will endeavor to meet the pressure of the tax and thus defeat it by exerting greater skill and industry, by an increased facility of production or a saving of expense, so that the tax would not continue to fall on the producer; nor again would it fall on the consumer.[1] In reality this doctrine of McCulloch explains, not any process of shifting, but what we termed in the introduction, the "evasion" of taxation which is a very different thing. This idea of evasion may thus be said to have been introduced into scientific discussion by McCulloch.

The treatment of the subject by Fawcett is remarkable first for its exaggeration of some of the mistakes of the older economists, as e. g. the contention that a tax on commodities raises prices far beyond the amount of the tax, and secondly for the very confused ideas on the incidence of local taxation.[2] As both these points will be treated of fully later on, we may omit them here.

An able criticism of the older absolute theories is to be found in the work of Cliffe-Leslie. Cliffe-Leslie pointed out that the older conclusions were frequently too rigid. "The theoretical canons commonly applied to determine the incidence of taxes . . . . are often misleading. They furnish us simply with inferences from ideal 'average' or 'natural' rates of wages and profit, respecting the 'tendencies' of taxes 'in the long run' and in the ab-

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[1] McCulloch, "A Treatise on the Principles and Practical Influence of Taxation and the Funding System", (3rd ed. 1863), 72.

[2] Fawcett, "Manual of Political Economy", (6th ed. 1883), esp. 551 and 613.

sence of disturbing causes.' But taxes are paid immediately, under the real conditions of life, and out of the actual wages or profits or other funds of individuals, not out of hypotheses or abstractions in the minds of economists".[1] Cliffe-Leslie called attention to the effects of what has been termed "economic friction" in neutralizing the working of supposed immutable laws and in producing practical effects the very reverse of those assumed. He confined his arguments, however, chiefly to a few taxes, and his own constructive work is not very elaborate. His special doctrines will be noticed below.

VIII.—The Negative or Agnostic Theory.

The ablest expounder of this theory is Adolf Held. Held's discussion of incidence is based on a denial of cost of production as a condition of normal profits.[2] He follows Schäffle in generalizing the rent conception, and is in so far a forerunner of the recent English and American writers who adopt the same idea. This conception, applied to profits, results in the theory of greatest cost and in the explanation of profits as the difference between greatest cost and market price. Held however does not draw the correct conclusions from his theory. He was an acute thinker and a man of the noblest ideals; but he became so imbued with the idea that all the old political economy was worthless that his strictures are as often false as true. Like so many of the younger Germans

[1] T. E. Cliffe-Leslie. The Incidence of Imperial and Local Taxation on the Working Classes. In his "Essays in Political and Moral Philosophy", 1879, 192.

[2] Held, "Zur Lehre von der Ueberwälzung der Steuern". *Tübinger Zeitschrift fur die gesammte Staatswissenschaft*, 1868, 422–495.

he was stronger in criticism than in construction; and his own positive contributions to pure theory are not very profound. His whole treatment rests on a misunderstanding, which sometimes almost seems a wilful perversion, of the doctrine of cost of production. It would not repay us to discuss all his points in detail, as even the Germans themselves, who were at one time deeply impressed with his views, have now repudiated his extreme doctrines. His conclusions are chiefly negative, and may be summed up in the confession that we can know nothing about the whole subject of incidence.[1] From Held therefore we can learn nothing positive.

IX.—The Socialistic Theory of Incidence.

It is worth while also to mention the socialistic theory of incidence, especially as developed by Lassalle. Lassalle devotes himself primarily to the consideration of the laborer's interests. He calls indirect taxes all those which are not assessed directly on individual income or property and includes under the heading indirect taxes not only all taxes on consumption but also land and business taxes. All these indirect taxes fall ultimately on the poorer classes of society, because the German laborer has not sunk quite so low as Irish workman or Indian ryot, and because a little more can be taken from his wages before reducing him to starvation. Smith and Ricardo, who are correct enough in their theory of the incidence of taxes on produce, are mistaken here,

[1] *Cf.* as a sample the following conclusion: "Ueber die Abwälzung der Kapitalzinssteuer lässt sich also gar nichts sagen, sie lässt sich nicht einmal allgemein leugnen." *Ibid.* 481.

says Lassalle. For it is a scientific fact that wages are always the last to rise in price as compared with other commodities. It is therefore the laborer who bears all the so-called indirect taxes,—i. e. the major part of all taxes.[1]

X.—The Quantitative or Mathematical Theory.

The authors who have in some respects, and within a limited field, done the best work in the study of incidence of taxation are precisely those who have hitherto generally been overlooked.[2] They may be called for lack of a better name the quantitative or mathematical school.

Of these by all means the ablest and most suggestive is Cournot. Cournot started out from the assumption that the whole theory of incidence of taxation is an integral and a necessary part of the general theory of value. In his earliest and most profound work,[3] in which he first laid down so many of the principles which to-day form the chief part of the so-called new doctrines in pure economics, he attempted to apply his theory of value to the study of taxation. He studied commodities under the regime of monopoly and of competition respectively, and applied the methods of differential calculus to ascertain what influence an increase in the supply price of any commodity—as e. g. a tax—would have

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[1] Lassalle. "Die indirekte Steuer and die Lage der arbeitenden Klassen", 1863, pp. 9, 36, 41, *etc.*

[2] Not one of the recent German or French elaborate works in finance refers to a single member of this school. Kaizl and Falck also neglect them completely.

[3] Cournot, "Recherches sur les Principes Mathématiques de la Théorie des Richesses", 1838, Chaps. 6 and 8.

on the producer as well the consumer. He analyzed the laws of constant, increasing and diminishing returns in their relations to this influence, and he came to some important conclusions which will be discussed later on in the body of these articles.

Nevertheless, while it is undeniably a relief to read the clear cut and precise doctrines of Cournot as compared with the vague and misty generalizations of many writers of the eclectic school, Cournot's study of incidence is by no means adequate. It is good, as far as it goes,—but it does not go far enough. Cournot's whole study is practically a discussion of the incidence of a tax on commodities,—or as we would say of a certain class of indirect taxes. He fails to remember that there are other taxes besides those on commodities and profits; and that to regard a tax as raising the normal supply price or cost of production of a commodity by no means exhausts the possibilities of the case. It is true indeed that in a later work[1] he attempts to discuss the incidence of taxation in less mathematical form, and to extend the discussion to other taxes. But the attempt is far from successful. In certain cases, as e. g. the tax on buildings, his views are positively erroneous. Whole classes of taxes are completely omitted—like the tax on wages, etc.,—and no attempt is made to lay down any general conclusions. But in so far as the study of indirect taxation is concerned, Cournot's book has never yet been surpassed.

Some of Cournot's ideas were further developed by another French mathematician, Fauveau. Fauveau, however, added practically nothing except a series of elaborate mathematical formulae, and he is

[1] "Principes de la Théorie des Richesses", 1863, Book III, Chap. 8.

to be noticed in the main only because of his energetic opposition to the optimistic theory. "The diffusion of taxes", says he, "cannot render taxes proportional any more than the diffusion of light makes a room equally illuminated in every part whatever be the position of the candle."[1] And Fauveau concludes rather sadly that it is quite as easy for an originally equal tax to become unequal in its operation, as for an originally unequal tax to become equal in its operation.

Many years later an attempt of a similar nature was made by an English mathematician, Fleeming Jenkin. Jenkin's essay, however, is exceedingly short, and deals mainly with what he calls taxes on trade, but what are virtually taxes on commodities. Although he evidently knew nothing of Cournot, Jenkin also made use of diagrams based on a combination of the demand curve and the supply curve. He concludes that "the ratio in which a tax on commodities falls on sellers and buyers is simply the ratio of the diminution of price obtained by the sellers to the increase of price paid by the buyers".[2] In his treatment of taxes on land and on houses Jenkin fails to make any of the qualifications which alone can give the results practically true in every-day life. And above all he entirely omits other taxes

[1] G. Fauveau, "Considérations Mathématiques sur la Théorie de l'Impôt", Paris, 1864, 58. "La diffusion de l'impôt nous parait-il, ne peut pas le rendre en définitive proportionnel pas plus que la diffusion de la lumière ne fait qu'une chambre est éclaircie également en tous ses points quel que soit l'endroit de cette chambre où l'on a placé une bougie".

[2] Fleeming Jenkin, "On the Principles which Regulate the Incidence of Taxes." Proceedings of the Royal Society of Edinburgh, Session 1871-72, 618-631. *Cf.* also his "Recess Studies" for his Demand and Supply schedule.

and makes no attempt to give general laws of incidence. But in regard to the special point of the influence of taxes on cost Jenkins remarks are suggestive and will be considered later on.

Finally in 1882 a young Italian economist, Pantaleoni, devoted a whole volume to the study of incidence of taxation.[1] He, also, was ignorant of the work of Cournot; but attempted to base his whole theory on the doctrine of cost of production worked out on arithmetical lines. Pantaleoni devotes over half the work to what is really a part of pure economic theory—the doctrine of value—and then proceeds to discuss the incidence of some of the chief separate taxes. It is the most comprehensive work ever published on the general subject, although, strange to say, it has hitherto never received any consideration outside of Italy itself. While there is a great deal of acute and original thought in the monograph, the work suffers severely from the fact that it attempts to build up the whole edifice of incidence on economic theories which are either obsolete, or when new, often erroneous. Thus his whole treatment of the tax on profits is rendered almost worthless by the erroneous doctrines of profits that he espouses. So again his treatment of the land and house tax is neither exact nor correct. It may in fact be affirmed that many of the doctrines upheld in the work no longer represent the views of the author to-day.[2] We omit in this place a detailed state-

[1] Maffeo Pantaleoni, "Teoria della Traslazione dei Tributi. Definizioni, Dinamica e Ubiquita della Traslazione". Rome, 1882.

[2] In answer to a recent letter of the present writer stating that he did not agree with several of the doctrines laid down in the work, Prof. Pantaleoni replied: "I do not agree with myself", and intimated that his present views differ from those expressed in the book.

ment of the special doctrines, as we shall have occasion to revert to them constantly in the following essays, for the purpose both of approval and of dissent. With all its faults Pantaleoni's work contains by all means the best existing treatment of the incidence of taxation, as a matter of pure theory.

Of the recent so-called exact or mathematical school in political economy scarcely any one has made any applications to the theory of incidence of taxation. Neither Jevons nor any of the Austrian writers like Menger, Wieser, Böhm-Bawerk or Sax has made use of his theory of value to explain the doctrines of incidence. Walras, indeed, refers to the works of Cournot and Dupuit in relation to the theory of monopoly taxes, but his own treatment is too simple a one. According to Walras a tax on land, owing to the theory of the rent charge, rests only on the original owners. A tax on wages rests on the wage-earner, because the theory of capitalization is not applicable here. A tax on what he calls artificial capital or interest is nothing but an indirect tax on consumption because it is inevitably shifted. Taxation can really hit only "natural wealth", i. e. either agricultural rent or wages.[1]

Among English writers Marshall is the only one who has called attention to the connection between the doctrine of incidence and the general law of value.[2] He follows Cournot very closely indeed, but has enriched the discussion with some interesting diagrams. Everything that was said above by way

[1]Léon Walras, "Théorie Critique de l'Impôt", 1861, 31–57. In his "Eléments d'Economie Politique Pure", M. Walras seems to have altered his opinion, but still clings to the rent charge theory. 2nd ed. (1889), 506–520.

[2]Marshall, "Principles of Economics", 442, note 2.

of criticism of Cournot may be repeated as equally true of Marshall. However Marshall's whole treatment of incidence is very fragmentary and is confined to one particular point, as will be seen hereafter. But it must be remembered that Marshall expressly reserves his study of incidence for a future volume.

The most recent work on the topic is by Conigliani.[1] But Conigliani devotes himself primarily to the wider subject of the general effects of taxation. And in so far as he speaks of shifting and incidence, he avowedly attempts to give only the "abstract, general theory," apart from any application to any existing systems of taxes, and apart from any "exceptional, transitory or irregular" phenomena. The result of such a method of study, based on the recent Austrian theories of subjective value, is partly a series of the baldest truisms in which we cannot, even with the best of will, discern a single advance in theory, and partly a statement of tendencies couched in such very general terms as to be of virtually no use in the elucidation of practical problems. We include Conigliani under the mathematical school only because he himself professes to be among its followers. But it would be fruitless to enter into the details of his work. It is of a far different calibre from those of Cournot or Pantaleoni. We give as an example his final conclusion: "A tax of given intensity and extension, falls with the less intensity and extension on individual economies, and produces a less unequal effect on economic society, in proportion as society is more developed. The incidence, when it does not have a considerable extension or intensity,

[1] C. A. Conigliani, "Teoria generale degli Effetti Economici delle Imposte. Saggio di Economia Pura". Milan, 1890.

assumes the less easily the character of a change in activity, in proportion as society is more advanced. Finally the change in consumption will take place with greater disturbance of the equilibrium in the degree of the satisfaction of wants, and therefore with less change in the internal arrangement of individual economy, in proportion as the social environment in which these changes of taxation take place is more advanced".[1] And this Conigliani tells us "completely exhausts the general theoretic problem of the effects of taxation". If this were true we might feel tempted to say that we had better leave unstudied "the general theoretic problems."

[1] "Un 'imposta di data intensità ed estensione, è tanto meno intensamente ed estesamente incisa su alcune economie, e lo è tanto meno disegualmente sulla società economica complessiva quanto piu questa è evoluta. L'incidenza poi, quando essa non abbia una considerevole estensione ed intensità, assume tanto meno facilmente il carattere di un mutamento nell' attività, quanto più la società é progredita. Infine il mutamento nel consumo si avvera con tanto maggiore violazione dell' equilibrio dei gradi di soddisfazione dei bisogni e quindi con tanto minore alterazione dell' ordinamento interno dell' economia individuale, quanto più progredito e l'ambiente sociale in cui si immagini il mutamento di imposta." p. 276.

CHAPTER II.

TAXES ON AGRICULTURAL LAND.

The assertion is frequently made that the American farmers are taxed out of all proportion to their ability to pay. This is due chiefly to the fact that they have to assume to a large extent the burdens of the other taxpayers. Outside of the rural districts the great mass of personal property consists of intangible personalty, which as a rule escapes taxation almost completely.[1] In the rural districts, on the other hand, the great mass of personalty consists of visible tangible property used by an agricultural community. The country landowner who is generally assessed also on his visible personalty must thus pay over and above his just proportion of the public dues an additional share which ought to have been assumed by the owners of intangible personalty. What is a real property tax in the rest of the state becomes a general property tax for the farmer.

The force of this contention is sought to be weakened by the commonly accepted doctrine that the tax on the farmers' property is diffused throughout the community. The farmer will add the tax to the products of his farm, and will in this manner recoup himself for the original outlay. The tax will be shifted, so runs the argument, from the producer to the consumer; and since everyone is a consumer, the

[1] Cf. my article on "The General Property Tax". *Political Science Quarterly*, Vol. V, 24.

tax will virtually fall on the community at large, and is hence a just and equal tax.

This argument is a surprisingly weak one although, strange to say, its chief weakness has not hitherto been pointed out. Even granting for the moment that the tax will be shifted in its entirety by being added to the price of agricultural products, it would fall on individuals only in so far as they were consumers of these products. In other words if this were the only tax it would be a tax on consumption, that is on expense.[1] Now of all bases of taxation expenditure is by all means the least equitable. What a man spends is absolutely no criterion of what he is able to contribute to the burdens of the state. It bears no fixed relation to taxable capacity. Whatever we regard as the test of individual faculty—whether property, product or income,—not one of these has any assignable proportion to expenditure. If one man has triple the property or income of another but whether through thrift or miserliness spends only the same amount, it surely cannot be said that the taxable capacity of the latter is equal to that of the former, especially if the latter spends up to a very narrow margin of his revenue, as frequently occurs. In the one case there is a reserve fund available for future exigencies which is entirely lacking in the other, and which completely alters his obligations to the community. Moreover, it is a well known fact that differences in expenditures are rarely so great as differences in property or income. A tax

[1]This was already seen in the seventeenth century by Sir William Petty, who says: "A land tax resolves itself into an irregular excise upon consumption, that those bear it most who least complain." See above, p. 15.

on consumption alone would therefore fall with increasingly crushing force on all those classes whose expenses swallow up almost their entire income, or perhaps even encroach on their capital. I do not of course mean to argue against the advisability of taxes on consumption as a part, and because of certain other advantages even a desirable and necessary part, of a tax system. My contention is directed against expenditure as the theoretical basis of all taxation. A tax on real estate only is, according to this doctrine of incidence, a tax on expenditure. It reaches only the poorer classes of society and exempts in ever increasing proportion the earnings or the property of the wealthy. And in so far as the farmers themselves belonged to the poorer classes they would bear a disproportionate share of the burdens. Thus the single tax on real estate just beeause of its supposed diffusion throughout the community would become the most unjust and oppressive of all taxes.

But in reality, of course, the whole supposition is incorrect. There is no such general shifting. The tax on the rural landowner will often tend to stay where it is put.

The question of the incidence of the land tax presents comparatively few difficulties. Since the time of Ricardo it has been treated frequently and, on the whole, with success. But it is remarkable that the writer who has discussed the subject with the greatest clearness and subtlety from the abstract view—the Spanish economist, Florez-Estrada —should have remained practically unknown to this day.[1] Nevertheless both Florez-Estrada's and Ri-

[1] D. Alvaro Florez Estrada, "Curso di Economia Politica". 2 vols. Published originally in London, 1828. I quote from the sixth edi-

cardo's doctrines require some qualification in order to fit them to the actual conditions of every-day life.

Theoretically there may be five different kinds of land taxes:

I.—Tax on economic rent.
II.—Uniform tax according to quantity or quality.
III.—Tax on gross produce, e. g. a tithe.
IV.—Tax on agricultural profits.
V.—Tax on the property or selling value.[1]

I.—Tax on Economic Rent.

If land be taxed according to its pure rent, virtually all writers since Ricardo area greed that the tax will fall wholly on the landowner, and that it cannot be shifted to any other class, whether tenant-farmer or consumer. Since land on the margin of cultivation pays no rent in the economic sense, and since the no-rent land fixes the price of all produce, a tax on rent cannot affect the price of agricultural produce and can therefore not be shifted. This point is so universally accepted as to require no further discussion.[2]

But a tax on pure rent is very rare. The more difficult questions arise when a tax is assessed so as to

tion, published in Madrid, 1848. An excellent French translation was made by L. Galibert under the title "Cours éclectique d'économie politique écrit en Espagnol", and published in three volumes in Paris, 1833. Pantaleoni is the only writer that has referred to Florez-Estrada, but he makes no efforts to qualify any of the conclusions.

[1]Florez Estrada makes a slightly different division. See his work, "Del Consumo de la Riqueza", Cap. v., De la Contribucion sobre la propriedad territorial, II, 328.

[2]Ricardo, "Principles of Political Economy and Taxation", Chap. 10.

include not only the rent of the landowner but the profits of the tenant farmer, or—as the case would be in America where landowner and farmer are one—where the tax is assessed according to the value of the property. For the market price of land is equal to the capitalized value of its economic rent plus the profits.

Ricardo maintained that when a land tax is assessed on the value of the land, or is imposed on gross produce or on quantity, it will always be a tax on produce, and consequently raise prices to the consumer.[1] This doctrine has generally been adopted by his successors. In reality, however, the matter is not so simple.

Let us take up:

II.—The Uniform Tax According to Quantity or Quality.

In this case, as Florez-Estrada has pointed out[2] there are four possible results, viz.: 1. not only the tax but a sum over and above the tax may be shifted to the consumer; 2. the exact amount of the tax may be shifted to the consumer; 3. the tax may be divided between producer and consumer; 4. the tax may fall entirely on the landowner.

The first case would be that of a fixed tax of so much per acre without distinction of value, as was true in some of the American commonwealths in the eighteenth century, especially Vermont and North and South Carolina. Suppose that there were three tracts of land producing wheat of the same quality,

[1] *Ibid.*, Chap. 12.

[2] French translation, Vol. III, 221 *et seq.*

but owing to a difference of fertility yielding respectively ten, twenty and thirty bushels to the acre; and let us further suppose that this quality of wheat was worth fifty cents a bushel. Tract A would thus yield five dollars an acre, tract B ten dollars and tract C fifteen dollars. If a tax of fifty cents an acre was imposed on all the land, the owner of tract A would have to obtain for his produce $5.50 or cease cultivating. But if the price of ten bushels were $5.50, the price of the twenty bushels produced on tract B would have to be $11.00, and of the thirty bushels on tract C $16.50, since the price of the bushel would always be fixed by the expenses of tract A, i. e. 55 cents. The owner of tract B would thus pay in taxes 50 cents more than before, but would obtain from the public one dollar more than before, that is he would make the consumer pay to him a sum over and above the amount of the tax. So again the owner of tract C would pay in taxes 50 cents more than before, but would obtain from the public one dollar and a half more than before. A uniform tax on quantity therefore inevitably takes out of the pockets of the consumer more than it puts into the hands of the tax collector.[1]

The second case would occur when the tax was not a uniform tax according to quantity, but a tax per acre graded into several classes according to quality, as for instance in Kentucky and Connecticut during colonial times.

If *e. g.* in the above case the tax per acre on grade A were 50 cents, on grade B $1.00, and on grade C $1.50, then not only would the price of wheat remain as before at 55 cents per bushel, but

[1] Ricardo had already called attention to this in Chapter xii.

the amount of taxes paid by the landowners would exactly equal the increased price obtained from the consumers. Hence, whenever a land tax is graded so as to follow with precision the differential advantages of production, the tax will be shifted entirely to the consumers, without causing them any additional loss. In practice, of course, such gradation of the tax has always been very rough, so that it is very unlikely that the exact amount of the tax and no more is shifted to the consumers.

The third case—that of division of the tax between producer and consumer—will arise when the graded acreage tax is imposed in such a manner that the progression of the tax exceeds the augmentation in price. If *e. g.* grade A were assessed at 50 cents, grade B at $1.25, and grade C at $2, the consumers would still have to pay more than before the imposition of the tax, but the owners of grades B and C would make less profits than before. The degree in which landowner and consumer would share the tax would depend entirely on the rate of the graduation or progression of the tax.

Finally, the fourth case—that of the tax resting entirely on the landowner—would occur on the supposition (which manifestly is a purely hypothetical case) that the lands of inferior quality were free of tax. For since such lands fix the price of wheat the owners of better lands could not raise the price, and since the tax is imposed on acreage, the tax would simply represent a diminution of their revenue.

So much for the fixed tax per acre according to quantity or quality—a tax that is to-day virtually unknown in civilized communities.

Of somewhat more practical interest in some countries is:

III.—The Tax on Gross Produce, or Tithe.

The incidence of a land tax on gross produce has been most clearly discussed by John Stuart Mill, who has been far more successful in his treatment of this tax[1] than in that of the other taxes with which we shall have to deal. Mill holds that a tithe, because it is imposed on land of all qualities, reduces corn rents in equal proportions; but that in the same proportion as corn rent is reduced in quantity, the corn composing it is raised in value. The producer on the worst land now pays one tenth of his produce in kind, but since all prices are fixed by his produce, his nine-tenths will sell for as much as the whole ten-tenths previously sold for. At first, therefore, a tithe would be shifted to the consumer.

But, as Senior has shown, this would be only the immediate, not the ultimate, effect.[2] The final result would be not an increase of price, but a diminution of production and therefore a deduction from rent. It would ultimately be a burden, not to the consumer but to the producer. This point has been demonstrated so clearly by both Senior and Mill that it will not be necessary to repeat their arguments, so familiar to all English-reading students. Moreover v. Thünen had already pointed out that the question whether a land tax is shifted to the consumer or not depends largely upon the character of the population as con-

[1]This is true, however, only of the later editions, where Mill accepted the corrections of Senior. *Cf.* "Principles of Political Economy", Book V, chap. iv, §§ 3, 4.

[2]Senior, "Political Economy", 122-125, sixth edition, (1872).

sumers. In poor countries a land tax would not even in first instance be shifted on the consumer, because the consumers could not afford to pay more. Such a tax would then simply lead to a lowering of the standard of life of the consumer, and to a decrease in the prosperity of the producers.[1]

Finally the doctrine that the tithe, even as the immediate result, is shifted to the consumer depends on the assumption that the tax is an universal tax, applicable to all the land. This is not necessarily true. To-day *e. g.* in England, only part of the land is still titheable, so that, as in the case of all partial taxes, the burden would be borne by the producer and not by the consumer. Even if all the land were titheable the presence of international competition, as will be shown later on, would render the tithe virtually a partial tax and thus not susceptible of being shifted to the consumer. In all the civilized countries where the tax on gross produce still exists to-day, it can no longer be regarded as one that is inevitably and necessarily shifted to the consumer.

We come finally to the fourth and fifth cases, viz.:

IV and V.—The Tax assessed according to Net Profits, or to Selling Value of the Property.

These two bases of the tax are equivalent, as has already been indicated. For the selling price of agricultural land is nothing but the capitalized value of the net profits ordinarily derived from its use.

Theoretically there may be two cases. Either the land tax is a part of a wider system which taxes

[1] v. Thünen, "Der isolirte Staat". Erster Theil (2nd. ed. 1875), 326–339.

also all other net profits or all other capital or property; or the land tax is a single, exclusive tax, while other profits or other classes of property are exempt.

In the case of a general tax on profits or of a general property tax, it is difficult to see how the land tax can be shifted to the consumer. The theory assumes that the landholder at the margin of cultivation will otherwise abandon his farm, after the imposition of the tax, and transfer his capital and labor to some other occupation. But to this argument it may be objected that if all other profits or property are equally taxed he would gain nothing by such a transfer. In fact, under a system of a general tax there would be absolutely no inducement for him to abandon his farm; and prices would consequently not be raised. If, therefore, a tax on landed profits or landed property were simply a part of a general income or a general property tax, there would be no shifting of the tax. It would tend to stay where it was put.

It might be asserted, however, that our general property tax is so only in name, since personal property as has been indicated above, is virtually exempt from taxation outside of the rural districts. It might further be said that Ricardo and the other English authors discussed this form of the tax on the assumption that it was an exclusive tax. Nevertheless it may be confidently affirmed that even on the assumption of the tax on agricultural profits or real estate being an exclusive tax it does not necessarily follow that it will be shifted to the consumer.

Ricardo's theory would hold good on two conditions—first, that there was an absolute mobility of capital and labor, and second, that the community in

question was so isolated that the farmers could fix the price of their own produce. In actual life, however, these conditions are far from being really existent.

The whole theory rests on the assumption that the landowner of the worst land in cultivation will abandon the land rather than cultivate it at a loss; and that the decrease of supply will raise prices to the consumer. Now in the first place it is incontrovertible that an increase of price will often lead to a decrease of consumption, which again would react upon the price,—so that at best only a portion, and not the whole, of the tax might be shifted to the consumer. But, furthermore, it is in actual life a very difficult matter for producers to decrease the supply of agricultural products. In order that any appreciable influence may be felt in the price it would be necessary for whole tracts of the lands at the margin of cultivation to be abandoned. Now this practically means wholesale ruin for immense classes, who perhaps have invested large sums in improving the land. Rather than abandon the land they will often prefer to continue cultivation at less than usual profits, for the no-rent land is simply that on which the cultivator gets just sufficient profits above the cost to enable him to live comfortably. In other words the tax would often have the influence of simply further degrading the position of the cultivators,—who will still prefer to remain on their land rather than lose all the capital invested. Only when the tax is so exorbitantly high as to swallow up the whole rent, and the whole profits, so as absolutely not to leave the cultivator any margin for living expenses, will he abandon the land in such large quantities as to

affect a material decrease of supply. But such a tax has not been known in civilized communities. In other words, a tax on the landowner, if it be not absolutely extortionate, will simply reduce the profits of the landowner. In proportion, that is, as the Ricardian theory of absolute mobility of capital from agriculture to commerce is attended with practical difficulties, the tax in actual life will tend to rest on the landowner and not on the consumer.

Secondly and more important, the Ricardian theory assumes an absolutely isolated community. But in actual life the market value of agricultural produce is fixed by the conditions of production in widely separated localities or countries. The imposition of a tax on the landowner of any one particular locality therefore cannot possibly change the price of the product. Ricardo overlooked the theory of international relations. If a tax precisely identical in character and amount were imposed by all countries on all farmers, then indeed the tax might be shifted to the consumer, given the absolute mobility of capital just discussed. But this is never the case. The Western farmer the price of whose wheat is fixed in Liverpool by the conditions of production in countries thousands of miles distant, will not get a whit more for his products if his taxes are doubled. He and he alone must bear the burden of the tax.[1]

In fact, if the Ricardian theory were absolutely true, it would be virtually impossible to make the landowners or farmers suffer by any land tax, provided it were not levied expressly on the pure economic rent. A country might then raise its entire revenue

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[1]Cf. *infra*, the discussion of the incidence of a tax on net profit in general, p. 16.

by imposing taxes on land alone, and yet in no wise injure the agricultural interests. Yet all history has proved the error of this view. From the day of the exactions of the Oriental monarchs and of the later imperial Roman tax system to the mediaeval methods of Spain and the arbitrary land tax of pre-revolutionary France, much of the misery of the agricultural classes must undoubtedly be attributed to the revenue system which burdened in first instance and primarily the farmer. Implicit reliance on the Ricardian doctrine might justify every exaction on the farmer, but would inevitably react on agricultural prosperity.[1]

Our conclusion, hence, is that under actual conditions in America to-day the landowner may virtually be declared to pay in last instance the taxes that are imposed on his land, and that at all events it is absolutely erroneous to assume any general shifting to the consumer. In so far as our land tax is a part of a general property tax, it cannot possibly be shifted; in so far as it is more or less an exclusive tax it is even then apt to remain where it is first put—on the landowner.

In England, where the farmer is almost universally the tenant and not the landowner, and where the rural tax or rate, as it is called, is levied according to rental value and imposed on the occupier, the question is primarily as to the incidence of the tax between landowner and tenant. It may be said that the tax will fall on the landowner in the case of pure competitive rents, and will be divided between the parties in the case of non-competitive rents. At any given time

[1] *Cf.* Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt". II, 153.

when the tenant makes out his lease he makes allowance for the rates which are collected from him. The rent which he is willing to give will vary with the tax which he is compelled to pay. In so far the burden falls wholly on the landowner. On the other hand if, after the lease has been made out, a change is made in the rates, either by law or by the working of local causes, this increase necessarily falls on the tenant farmer who advances the tax. Still this is not of much consequence in the long run because the tenant will insist on an allowance for the increase when a new lease is taken. On the whole, therefore, it may be said that the tax on agricultural land falls on the landowner, whether the owner be the occupying farmer as in America, or whether they are distinct personages as in England. But this is true only on the assumption that the rent is a true competitive rent. In that large part of England where there are no leases, and where farmers are generally charged with a lower rent than the purely competitive or rack rent, the greater portion of the recent increase in local rates has fallen on the tenant, not the landlord. Theoretically the occupier might demand and obtain a readjustment of his rent with every increase of rates paid by him; but practically as a matter of fact the greater portion of English farmers are not rack-rented. The rent is changed very rarely because it is inconvenient and expensive for the farmer to remove.[1] Thus in the case of non-competitive rents the incidence of the tax is partly on the owner, partly on the tenant.

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[1]See the careful analysis in Goschen, Draft report to the select committee on local taxation of 1870. "In his Reports and Speeches on Local Taxation", 1871, 165-166.

CHAPTER III.

TAXES ON URBAN REAL ESTATE.

In the case of city real estate it will be necessary to make a distinction between the two components of the real estate tax—the ground tax and the buildings or house tax,—the tax on the site and the tax on the structure. For they are really governed by entirely distinct principles. Strictly speaking we should have drawn the same distinction in the case of the agricultural land owner. But the distinction is unimportant in that case because in America at all events the tenant is almost in all cases the owner, and because the value of the farmer's buildings is generally of minor importance when compared to the value of his land. But in so far as this is not true, the same principles apply as those to be discussed now.

In the American cities where the occupiers of houses are frequently not the owners, the real estate tax is levied on the owners of the property, and the question of ultimate incidence is as between the landlord and the tenant—the owner and the consumer, *i. e.* the occupier. In England where the local rates are levied with very few exceptions on the occupiers,[1]

[1]Theoretically the local rates in England are assessed on the occupier. Even for a long period before the Elizabethan poor law (43 Eliza., Chap. 2) which is the basis of all English local taxation, it was the occupier and not the owner on whom fell the duty of relieving the poor. *Cf.* in general the history of local assessments in Castle, "On Rating," Chap. 1, and a volume published by the Poor Law Commissioners in 1846 entitled "The Local Taxes of the United Kingdom". However, under the Small Tenements Act of 1869 (32

not the owners, and are proportional not to capital value but to rental value, the question is more complicated because of the peculiar divisions of ownership. Thus not only is the occupier almost universally distinct from the owner of the building, but the owner of the building generally does not own the land. Furthermore the building owner usually does not pay a ground rent to the original landowner, but pays only a leasehold ground rent, which changes from time to time, to the individual or intermediary who has leased the land on a long rental and at a fixed ground rent from the original owner. The question of the incidence of rates is in such a case between the several parties—the landowner, the leaseholder, the building-owner and occupier.[1] Such

and 33 Vict., Chap. 41, §§3, 4) wherever the rateable value does not exceed £20 in London, £13 in Liverpool, £10 in Manchester or Birmingham, or £8 elsewhere, the owner may compound for the rate, and may be assessed instead of the occupier. Furthermore by the act of 1850 (13 and 14 Vict., Chap. 99) whenever the tenancy is for less than three months the occupier may deduct the rate from the rent. Under these two acts it has now become the practice for a part of the tenement house population and even for the inmates of flats and apartments to have the rates paid by the landlords, not the tenants. Nevertheless, in default of actual statistics it may be said that in the English towns local taxes are paid in first instance generally by the occupiers.

[1]There are four chief methods according to which houses are built in the English cities: (1) the freehold purchase system, where the builder simply buys the lot outright; (2) the freehold rent charge system, (called in Scotland the feu-system and in Manchester the chief-rent system) where the landowner sells the land to the builder and has no reversionary interest but reserves a perpetual fixed yearly payment called the rent-charge or chief; (3) the long building lease system where the builder takes a lease for 999 years, at a fixed annual rent; (4) the short building lease system (or London leasehold system) where the landowner leases the land to the builder, on what is known as an "improved leasehold ground-rent". See Sargant, "Urban Rating", 1890, Chap. 1; Evidence and Report of the select committee on Town Holdings, 1886–1890; and Munro, "The Local Taxation of Chief Rents", 1891.

conditions, although rare, are not absolutely unknown in American cities also. Our study of the shiftings, if true at all, must be applicable equally to the simple American and the complex English conditions.

The urban real estate tax is either a land tax, as in the case of vacant lots, or a tax on both the lot and structure, called in America the real estate tax and on the continent the house tax. Both these designations are, economically speaking, incorrect. The continental term is wrong because the house tax really includes a tax on the site as well as a tax on the structure. The American term is inexact because it confuses such entirely distinct taxes as the ground tax and the building tax, each of which is governed by different laws of incidence.

The value of a house depends upon the value of the structure apart from the land, plus the value of the lot. The value of the structure itself is fixed by the law which governs the value of any commodity whose supply can be increased at pleasure, i. e. in the long run it is equal to the cost of production, or rather of reproduction. The rent of the house proper is normally equal to the interest on the capital expended plus an annual sum which, when capitalized, will be sufficient, after paying for all repairs, to replace the capital by the time the house is worn out, plus the premiums on the fire insurance policy. The laws which govern the incidence of taxes on houses or house rent are therefore, as we shall see, analogous to those which govern the incidence of taxes on capital or competitive profits. On the other hand the value of the lot is fixed in agreement with the general principles of economic rent, according to which the price paid is measured by the superiority

of situation.[1] It would be still more exact to say that the value of a city lot is fixed by the general law of price which governs commodities that are not susceptible of a voluntary increase of supply, and that the economic rent of a lot is fixed by the law of monopoly value or monopoly profits.

We can assume four cases which correspond to actual facts:

I. The tax may be levied on the ground-owner alone, without any reference to a house tax on the house owner. This would correspond to Henry George's single tax. It would be in effect a tax on ground rents.

[1] Pantaleoni, "Traslazione dei Tributi", 208-213 makes a very long-winded argument against confusing economic rent with the rent of a city lot. Economic rent with him means agricultural rent and is due only to the law of diminishing returns. Rent arising from situation is not economic rent, but what he calls surplus rent (*sopra reddito*). But this surplus rent is simply another name for profits. Rent proper, he maintains, arises from the fact that the price is the same while the cost of production differs. Surplus rent, or profits on city lots, arises from the fact that prices differ, while the cost of production remains the same. The English, he thinks, have improved upon the Germans and French in distinguishing between land rent and ground rent; but have not seen that ground rent is really no economic rent at all. In answer to Pantaleoni it may be said that there is a certain justice in his distinction, but precisely in the opposite way from which he understands it. It is utterly arbitrary to confine economic rent to that arising from the law of diminishing returns. Ricardo himself saw this and Thünen developed it. On the other hand what there is of truth in what Sidgwick calls the static theory of rent is equally true of the causes which fix the site rent of a building lot. In other words, instead of applying the principle of economic rent to city lots, it would be more exact to say that the same reasons which fix the differences in value of a city lot also fix those of agricultural lands, i. e. the differences in the relative situation or of relative fertility combined with differences in situation,—or, in short, differential advantages in yielding net profits.

II. The tax may be levied on the house-owner, who may or may not be the ground-owner. This is the case with the Gebäudesteuer in Germany, and the Hauszinssteuer in Austria, *etc.*

III. The tax may be levied on the ground-owner, who is at the same time the house-owner. This would be the real estate tax of the United States.

IV. The tax may be levied on the occupier. This is the case with the local rates and the inhabited house duty in England.

It is with this fourth case alone that the English economists have busied themselves. On the other hand, most of the French and German works discuss only the second case.

I.—Tax on Ground-Owner.

The case of a tax levied only on the ground-owner is exceedingly simple. The owner who leases his land will always endeavor to get as much as possible for it. This price will in general be entirely unaffected by the imposition of a tax. For since the supply cannot be increased, and there is no question of cost of production, the only change in price will be effected through a change in the demand. Price, in other words, will be fixed by the degree of marginal utility. Now if the demand for the site increases to such an extent that the ground rent not only covers the new tax but leaves a profit in addition, the tax cannot be shifted to the lessee. For the price would have been the same without the tax, since the demand of the lessees is not affected by a tax on the lessor. The ground-owner will simply get less rent than he would have obtained had no tax been imposed,—that

is, the tax will fall on him. Again, if the demand for the site decreases, the price will diminish and the ground-owner can certainly not shift the tax. And if he sell the land in the meantime he will lose again in the diminished selling value of his lot. Finally if the demand remains the same, there will be no alteration of the price, and the ground-owner simply obtains less net income because of the tax. Therefore it may be laid down as a general rule that a tax laid on the owner of the soil, or on ground rents, cannot be shifted.[1]

When the tax on ground rents, however, is assessed not on the ground-owner but on the occupier, the results, as we shall see later on, are somewhat different.

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[1] J. S. Mill, Book V, Chap. 3, §6, tries to show that this is true only if we assume an equivalent tax on agricultural rent. He says, "If a tax were laid on ground rents without being also laid on agricultural rents, it would, unless of trifling amount, reduce the return from the lowest ground rents below the ordinary return from land, and would check further building . . . until increased demand or diminution of supply . . . had raised the rent by a full equivalent for the tax. But whatever raises the lowest ground rents raises all others, since each exceeds the lowest by the market value of its peculiar advantages".

The fallacy of this argument consists in the assumption of a no-rent building lot, a tax on which affects the rents of all city lots. The ground rent of a city lot has nothing to do with the question whether or not there is any no-rent land. The price for which a lot will rent is fixed entirely by the relative demand for the plot, since the question of supply or cost of production cannot enter into the problem. But the relative demand on the part of the lessee, as we have seen, cannot possibly be affected by a tax on the lessor. Hence a tax on ground rents will fall on the ground-owner, whether or not there be an equivalent tax on agricultural rent. The whole question moreover has simply a theoretical interest, since agricultural lands are almost always taxed as well as city lots. Sidgwick, "The Principles of Political Economy", Book III, Chapter viii, §8, iv, falls into the same error as Mill. See preceding note.

II.—Tax on House-Owner.

Let us take up next the case where the tax is imposed on the house-owner, apart from the question whether or not he is the landowner. In other words let us deal with the tax on the structure, or, if the tax is not levied according to capital value, with the tax on the building rent as opposed to the ground rent.

The generally accepted doctrine of Adam Smith, Ricardo and Mill may be expressed as follows: Buildings represent the investment of so much capital and labor. They require an outlay for construction, for maintenance, for repairs, for insurance. No one will enter on the business of building houses unless he can count on a definite profit, which must in general be equal to the returns from capital invested in undertakings of approximately the same nature,—that is in undertakings where the risk, the chances, the labor required and the general conditions which affect the investment of capital are about the same. A tax imposed on the building-owner will therefore generally be shifted to the occupier. For if the tax could not be shifted, it would reduce the profits of the builders below the customary level in similar occupations. The result would be a cessation of building operations, a consequent scarcity of houses and a gradual increase in the rent or value of existing houses until the margin will again be high enough to tempt the builder into further operations. The working of this law of the transferability of capital will of course be slower than in the case of quickly consumable commodities. For since houses are more or less permanent in character we cannot

assume an actual or immediate diminution of supply, as *e. g.* in the case of agricultural produce. Given a stationary supply of houses, the values or rents will rise only with the slow increase of population, *i. e.* with a relative diminution of supply. But in the long run the working of the law is inevitable. Such a tax will hence be shifted to the consumer, *i. e.* the tenant.

This doctrine, which may be called the orthodox opinion, requires qualification in some particulars. The two chief reasons why the theory of the inevitable shifting of the house tax to the tenant is not always true are (1) the result of a distinction between new and old houses, (2) the result of a distinction between general and exclusive taxes.

In the first place a distinction must be drawn between houses already constructed before the tax is imposed or increased, and those built after the imposition or increase of the tax. It might be argued that since a tax on new houses is always shifted to the occupier—for they would otherwise not be built—the same reasoning would apply to old houses. For a scarcity of houses will affect the values and rents of all houses, whether new or old.

This argument, however, is not convincing. Suppose that a town or a portion of a town is for some reason decaying in influence or desirability. In such a case values and rents of existing houses will of course fall. The owners of existing houses cannot possibly escape bearing the burden of the tax. They cannot shift the tax to the ground-owners, for since the structures are already on the land the ground-owners cannot be compelled by competition to reduce their ground rents. The house-owner will build only

on very long leases. Until the expiration of the lease he certainly cannot shift the tax to the ground-owner. On the other hand the house-owner will not be able to shift the tax on the occupier, because no actual diminution in the supply of houses is possible and because, by the supposition, there is no increase in the demand, but rather the reverse; so that there will also be no relative diminution of supply. Not until a condition of stable equilibrium will have been reached, will the building-owner cease to bear the burden. That is to say, it would not be a question of equality of profits, but simply a question of the existing state of demand and supply. Hence if population is stationary or declining, a tax on existing houses (and there will of course be no new houses, because there will be no demand for them) will inevitably fall on the house-owner. Furthermore, if he sells the house he will lose the capitalized value of the decrease of rent. So that under the theory of capitalization[1] only the original owner will bear the tax until there is a still further decline in population, when the process will repeat itself. Although the condition just described may be considered in some sense an exceptional one, yet the exception occurs in all communities at periodically recurring intervals. And although the reasoning would not be applicable to the general conditions of progressive society where new houses are being continually built, yet the distinction is of sufficient importance to invalidate the hard and fast rule of the orthodox economists.

Another objection, which however is less tenable, has recently been raised against the older doctrine. Pantaleoni in Italy and Sidney Webb in England

[1]See *supra*, p. 62.

maintain that a tax on the building-owner tends to be shifted not on the tenant but on the ground-owner. Pantaleoni claims that this must necessarily happen, because if the tax were to fall on the builders they would build no more houses, and thus effect a decrease in the demand for building lots. This again would result in a depreciation of the value of the land.[1]

This argument rests on a misconception. It is indeed true that the building owners will not bear the tax. But what reason is there for assuming that the mere cessation of building operations, which would ensue on the imposition of the tax, will cause a depreciation in the value of the lot? The non-construction of new houses cannot of itself cause the ground rents of existing houses to fall. It can only prevent a further increase in the value of the land, or perhaps, at most, bring about a fall in the value of vacant lots. Until the old leases run out, the ground rents of occupied lots will certainly not fall even if population and therefore demand diminish. Much less will they fall if simply a tax is imposed. And even after the old leases run out, the ground rents will fall only in case that the taxes on the houses are so extraordinarily high that the building owner, who has the privilege of renewal, will prefer to abandon the house entirely rather than to renew the lease. Only in this most exceptional case can the building tax be shifted in part on the ground-owner. If indeed the law of real estate were changed so that fixtures to the land would not go with the land, and if houses could easily be removed from plot to plot, then—but only then—would it be true that a build-

[1] Pantaleoni, *op. cit.*, pp. 221-223.

ing tax could always be transferred to the ground-owner in the shape of decreased ground rent. But under existing conditions of law and fact this can be true only in the exceptional case just quoted.

Mr. Webb's argument is equally inconclusive. He maintains that the ground landlord is not a fixed point. Land in the neighborhood of a city has only an agricultural value until it becomes ready for splitting up into building plots. But the value of such land, says Mr. Webb, does not pass imperceptibly from agricultural value to the building value. By custom there is always a great jump. The landowner who can get in any case a much larger than the agricultural value, has a fixed point of resistance. He will be willing to take a little less, since it is merely a question of competition between builder and land available for building. Hence the incidence of a tax on houses would be the same as that of a tax on land, viz.: on the landowner.[1]

This argument is fallacious because it ignores the fact that the building site is governed by the law of monopoly value. As between the landowner and the tenant, the tenant is the weaker party. The house builder in normal cases of increasing demand knows that he can more easily raise rents (since demand increases) than compel the ground-owner to take less than the market value. The landowner is not compelled to part with his land; but the tenant is compelled to occupy some apartments.

It would therefore be true in the main that, given the normal conditions of progressive society and the continued existence of prosperity—and apart from

[1]Webb, in Report from the Select Committee on Town Holdings, *etc.*, 1890, qu. 42–44, pp. 5–6.

the qualification to be noticed below,—the tax on the building owner is shifted. And since, as we have just seen, the tax can not be shifted to the ground-owner (except in the rare case mentioned) it will tend to be shifted on the other party interested—the occupier. In other words, given an increased demand for house accommodations, the rents of existing houses will rise until the supply of new structures is equal to the demand.

Now it may be said that in the meantime the house-owners have a practical monopoly. Theoretically indeed the house-owner during the interval would himself bear the tax if the rise of rents were due solely to increase of population, because in the face of this increased demand he could have obtained the identical rent had the tax not been imposed. In other words, as in the case of all monopolies where the price is fixed only by the purchasing power of the consumer, the tax would simply mean a diminution of the otherwise greatly enhanced profits to the house owner. Practically however there is never such an interval in progressive communities. Houses are built continually, and if there is any lack of supply it is then owing to the decreased profits of the house building. In order that these profits may be secured, the tax must fall where alone there is a margin for it, that is on the rent paid by the occupier. But since the rents in the new houses fix the standard of rents in the old houses, (allowance being made for the superiority of situation, which however has nothing to do with the building rent, but only with the ground rent) the owners of all houses both old and new are able, in the normal cases here cited and in the long run, to shift the burden to the tenant.

But it must be remembered that this is true only in the normal cases and in the long run.

The second qualification of the doctrine that the building tax will be shifted to the occupier rests on the distinction between a general and an exclusive tax. The whole argument up to this point has been conducted on the assumption that the house tax is a special or exclusive tax. As soon as other forms of capital or other profits of investments also are taxed, the whole basis of the argument falls away. This has been almost totally overlooked by all the writers on the subject. The doctrine of the shifting of a house tax on the occupier depends on the assumption that would-be house builders will otherwise prefer to put their money in non-taxable investments or occupations, which would bring about the scarcity of houses and the increase of rents. But if other capital or profits also are taxed there will be no reason for refusing to invest in houses. Rents and values will hence not rise, and the tax cannot be shifted. In other words, when a house tax is part of a system of taxation the other elements of which are taxed at the same rate, the incidence of the tax will always be on the original taxpayer, i. e. the house-owner. His profits like those of all other capitalists are reduced by the tax.

So again if house property or house rents are taxed at a higher rate than the property or profits of other classes, only the surplus above the average rate of the tax will be shifted to the occupier, and that only in the normal cases already mentioned.[1]

[1] The theory of capitalization of incidence is not applicable here, although remarkable to say it has been attempted by Myrbach, "Die Besteuerung der Gebäude and Wohnungen in Oesterreich", *Tübinger Zeitschrift*, Vol. 41 (1885) esp. p. 409.

We may thus sum up as follows: If a tax is imposed on the building owner, it will remain on the building-owner when population decreases or is stationary or when the locality decays in desirability. It will be shifted to the ground-owner only when the diminution or decay is so great and the taxes so high that the building-owner will voluntarily relinquish the house rather than renew the lease. It will be shifted to the consumer, that is the occupier, under the normal conditions of advance in economic welfare in so far as the tax is an exclusive tax. Otherwise only so much will be transferred to the occupier as exceeds the usual tax rate for other property or profits, while the remainder will fall upon the house-owner. The exact proportions depend upon the general system of taxation in each particular country or epoch and upon the particular conditions of the individual case.

III.—Tax on House- and Ground-Owner.

We come next to the third case, namely where the tax is levied on the ground-owner who is at the same time the house-owner. This is the common American system of the real estate tax. The question of incidence is here only between the owner and the tenant. The problem is therefore a comparatively simple one, as we need only to combine the conclusions already arrived at in the two preceding cases.

In so far as the real property tax may be resolved into the site tax and the building tax, the tax on the land when assessed on the landowner will tend to remain, as we have seen, where it is first put. The incidence of the ground tax, in other words, is on the

landlord. He has no means of shifting it. For if the tax were to be suddenly abolished he would nevertheless be able to extort the same rent, since the ground rent is fixed solely by the demand of the occupiers. The tax is simply a diminution of his profits.

The incidence of the house tax on the other hand is fixed by the rules laid down above. The question, therefore, as to how far the real estate tax is shifted on the occupier in American cities depends partly on the actual existence or non-existence of a general property tax, partly on the relative value of the house and the lot, and partly on the peculiar circumstances of the particular piece of property.

If our general property tax were actually enforced, then beyond all doubt the real estate tax would be entirely borne by the owner. But it is precisely in the American cities that the general property tax has become practically a real property tax. In other words, city real estate bears if not the exclusive, at least the greater, weight of municipal taxation. In proportion as the city houses are taxed at a far higher rate than other capital, the main condition under which the tax *may* be shifted to the occupier is present. If we take the small American towns where the investments are mainly local and where personal property is reached to a fairly good degree, then it is very probable that the real estate tax is not shifted to the occupier. But the larger the city, and the greater the chances of investment in outside capital, the less will be the proportion of personalty taxed, and the greater will be the possibility of a shifting of a part of the real estate tax.

The possibility of the tax being shifted turns into a probability when we remember that the building

tax tends to form the greater part of the total tax. The average dwelling house in New York city, for example, is worth, when first built, from two to three times as much as the lot. In the tenement house districts the proportion is slightly, if at all, less, except in the case of the old tumble-down wooden houses which are fast disappearing. Of course it is true that with the passage of time the value of the house tends to decline while that of the lot tends to increase, so that it might be inferred that our real estate tax falls mainly on the owners. But this tendency is materially counteracted by the fact that as the site becomes more valuable, the owners are apt to tear down the old structure and to erect more expensive, and therefore more lucrative, buildings. Even in the crowded business centres it is now becoming the custom to erect vast buildings whose value considerably exceeds that of the ground on which they are built.

Finally, remembering the qualifications laid down above, it may be said in short that while the real estate tax falls on the owner in case of stationary or declining population, a considerable portion of the tax is shifted on the tenant in the normal case of prosperous town or city districts under the present administration of our property tax. When we reflect that in the city of New York over three-quarters of the population live in tenement houses, we are thus forced to the conclusion that a large burden of our American local taxation is to-day borne by those least able to pay. The question as to how far these may again be able to shift the tax on others is a part of the larger question of the tax on property, profits or wages, and will be discussed later on.

IV.—Tax on Occupier.

We take up finally the question of the incidence of a tax assessed upon the occupier according to the rent he pays. This is the system of the English "local rate." Here again we must distinguish between the ground rent and the building rent.

Let us discuss first that portion of the rent theoretically levied on the land. In accordance with the general principles laid down above in our discussion of the tax on the ground-owner it might seem that the tax on rent though advanced by the occupier must in the long run be borne by the ground-owner. The tax will be shifted by the occupier to the house-owner, it is said, because when the tenant takes out his lease he will make a deduction from his rent measured by the height of the tax. He will offer only as much rent as is warranted by the superiority of the site, and this superiority is not increased by the imposition of a tax. In so far then the tax will fall on the house-owner. But the building-owner again will shift the tax to the owner of the land. As it has been said, "The builder calculates on a certain profit, or else he would not build; he knows that tenants of a certain class can afford to give a certain rent and no more for a certain kind of house; and therefore if building is to take place at all, it is clear that the rates must fall there where alone a margin exists to bear them; that is to say, on the price given, or ground rent promised to the owner of the soil".[1]

[1] Goschen, Draft report, etc. *Op. cit.* 166. The same idea is shared by most of the English writers. The evidence given before the Select Committee on Local Taxation in 1870 contains every possible view. But they are for the most part mere bald statements. *Cf.* esp. qu. 1276, 2731, 2739, 3211, 3404 and 4050.

The contention, however, that this part of the tax falls wholly or necessarily on the ground-owner, although it has been usually adopted, is partially incorrect; and for three reasons. First, the ground rent might be so low and the rates so high that the builders could not afford to erect any more houses. They could not hire the land for any less because the ground rents are so low that the owner would otherwise prefer to use the land for other purposes. The result would be a diminution in the supply of houses and a consequent rise of rent to the tenant or consumer. But this first supposition, let us say, will happen very rarely and may be passed over as unimportant.[1]

Secondly, the whole argument that this part of the tax falls on the landowner rests on the assumption that at the beginning of every lease the lessee will make allowance for the tax. The assumption is not of much use in the case of long leases. After the lease has been taken out an unexpected change may occur in the rates. In fact, the growing tendency of modern local taxation is toward an increase. The landowner who has fixed the ground rent for a number of years will still get this rent irrespective of any growth of rates. The increased burden can, then, not be shifted on him. It must be borne by the occupier who advances the tax in first instance. Not until the expiration of the lease will the tenant be able to make a new arrangement by which he will try to shift the burden on to the owner. Thus only in the case of short tenancies could it be true that the tax falls on the owner. But in all those numerous cases—numerous especially in England—where the occupier

[1] Mr. Goschen himself makes allowance for this.

rents for a term of years, the excess of any rates beyond the amount calculated in the original lease necessarily falls on the occupier. The important point to be noticed is the *original* imposition of the tax—a point too often neglected. If the owner were to be assessed for the taxes in first instance, as in America, there would be no question that this excess of taxes, just as the remainder of the ground rent tax, might fall on him. But if the occupier advances the tax, he can not improve his condition until the expiration of the lease. In England, then, the ground rent tax does not fall wholly on the owner, but at any given time may be borne in part by the occupier.

Thirdly, we come to the question whether any part is really borne by the owner at all. In the preceding paragraph it has been taken for granted that at the beginning of each short lease the tenant will insist on a reduction of the rent as a compensation for the local rates assessed upon him. Only on this assumption will the owner ultimately bear the taxes. But this assumption is not always correct. We come in fact to the pith of the problem, and to its most important phase. The question is this: Who bears the taxes in the case of short leases or tenancies by the year, the quarter, or, as is the case in the majority of the tenement house population, the month or week? It is precisely in this class of cases that the ground rent in the crowded slums forms so large a proportion of the total rent.

It may be said that the ultimate incidence of the ground tax is fixed by the general law of value. If the lot is situated in an outlying or decaying portion of the town where the demand is slack the tax, even if advanced by the tenant, will be shifted to the

landlord. The occupier can afford to choose and will not voluntarily assume the burden of any one else. But in proportion as we approach the central or thriving parts of the town the land acquires more and more of a monopoly value, until each square foot commands a fabulous price. In such a case, now, the matter is different. Even if the occupier advances the tax, it is not necessarily true, as Adam Smith says, that "the more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground", i. e. that the tax would fall entirely on the ground-owner. If the tenant could always deduct the tax from the rent, it would be true—but not otherwise. If the competition for lodgings in a crowded part of the city be such that a house or an apartment in that locality will rent for two hundred dollars, the occupier who has been paying ten dollars as the ground tax proportion of the total tax will not pay any less for the premises if his tax is increased to fifteen dollars. There is no reason why the landlord should take any less, as long as the demand has not changed. The one result, indeed, that might ensue would be that the tax would be so high as to cause the tenant to content himself with meaner apartments or rooms in a less desirable locality, in other words to lower his general standard of life—a sad result of high taxes. In such a case the decreased demand for the original house would indeed induce the house owner to be satisfied with less total rent, and he in turn would endeavor to shift the ground-rent portion to the landowner. But as we have seen above he could not do this unless the tax were so high as to make him willing to abandon the house. But, above all, the process here

[1] "Wealth of Nations", Book V, Chap. 2.

described does not by any means imply a shifting of the tax from the occupier to the landowner. The occupier could evade the tax, but could not shift it. Evasion is quite another thing from shifting. The tax that he would pay on his smaller rent would still fall entirely on him. The landlord may have, for the time being, less revenue than before but the new tax levied on the tenant would nevertheless fall on the tenant. A small tax on smaller rent is just as bad as a high tax on high rent.

Conversely, if the occupier has been paying ten dollars as the ground-tax proportion of the total tax, he will not normally have to pay five dollars more for the apartment if his tax is reduced five dollars. He will be compelled to do this only if the competition has suddenly increased to such an extent that the rent demanded by the owner will have no limit but the amount which the occupier can afford to pay. But this is true only in exceptional cases of suddenly enhanced demand, and not true in normal periods when rents are fixed more or less by custom in comparison with neighboring sites of similar eligibility. And even in these exceptional cases, the rise of rent would not be due to the abolition of the tax,—for rents would rise, tax or no tax. Hence it may be said that even in short or periodically renewed leases the ground tax will normally remain on the tenant.[1]

[1]Since the above was written the article of Mr. Blunden on "The Incidence of Urban Rates" has appeared in the *Economic Review* for October, 1891. Mr. Blunden's conclusions agree in the main with mine, with one exception. He seeks to make a distinction between dwelling houses, and shops or business premises, thinking that rates on shops in the best situation fall on th ground-landlord because he possesses a monopoly. But in the first place Mr. Blunden really makes no such distinction, because he tells us (p. 496), that rates on ordinary dwelling-houses in congested areas

Above all, the old theory that the tax on the occupier will be shifted to the landlord rests on the assumption that there is no economic friction. But this assumption is plainly untrue. Just as we objected to the Ricardian absolute theory of the shifting of the land tax to the consumer because of the untenable assumption of perfect mobility of capital and of territorial isolation, so the same objection has been made to the theory of the shifting of the local rates from occupier to landlord because of the same untenable assumptions. As it has been well put, economic rent is "the rent which an intelligent tenant who had an alternative investment for his capital, and mobility, and acquainted with the market and his own industry, would offer to pay".[1] But the rent actually paid

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may also fall on the ground-owner,—while in less desirable localities rates, whether on dwelling-houses or on shops, do not fall on the ground-owner. Mr. Blunden's distinction is therefore really one between monopoly and competitive sites, not between shops and dwellings. But even this distinction of Mr. Blunden's is untenable, for the advantages of sites merge into each other by imperceptible gradations. See note on page 132 below. An increase of rates, says Mr. Blunden, would fall on the landlord. But why should the landlord take any less rent if he has a strict monopoly, and if the demand for that site by other shopkeepers remains the same? The shopkeepers will indeed look upon the increased tax as an increase in their expenses of production, and, since the local rates form a general tax on the whole set of local shopkeepers, they will try to shift the tax to the purchaser of their goods. But that is an entirely different question from the one which is occupying us here. The relative differences in eligibility between the monopoly site and a less desirable site are not altered in the least by the imposition or the remission of a tax which affects both sites proportionally. And there is therefore no reason why rents should be affected by a tax on the occupier,—just as there is no reason why in the United States a tax on the ground-owner will enable him to demand more from the tenant, or why the remission of his tax will induce him to charge less rent.

[1]Sidney Webb in "Select Committee on Town Holdings", 1890, Evidence qu. 51.

often differs from pure economic rent. John Stuart Mill already pointed out that in Ireland agricultural rents are often persistently above the economic rent, mainly because of lack of opportunity and lack of mobility on the part of the tenant. So in the same way the tenants in the slums of large cities have practically little mobility. They must live in the neighborhood of their work, they shrink from the expense involved in moving from apartment to apartment, and their choice is limited in a hundred ways. Here, as in so many other cases, the tendency of the tax is to stay where it is first imposed.[1]

In fact, however, this argument of "economic friction" does not apply to the old theory that rates normally fall on the ground-owner, for this old theory, as we have seen, is no longer tenable. The argument of "economic friction" applies really to the new and more correct theory, here espoused, that rates normally fall on the occupier. The normal state of affairs, as we have just seen, is that the rate rests on the occupier, where it is imposed. The element of "economic friction" enters in the case of decaying or undesirable localities, where there is no competition, and where the occupier will be able to shift the rate to the owner.

We see, thus, that the incidence of a tax on ground rent is not the same when the tax is advanced by the tenant as when it is assessed on the ground-owner. In the latter case, as in the United States, it is always

[1]As Sir T. H. Farrar says: "Whatever be the theory on these matters, a tax is very apt to stick where it first falls". Select Committee, *etc.* Evidence qu. 1246. *Cf.* Thorold Rogers: "It is by no means the case that a person who has a tax imposed upon him can always impose the whole of that tax upon his neighbor". *Ibid.*, qu. 2721.

borne by the ground-owner; in the former case, as in England, it is generally borne to a considerable extent by the occupier and only in more or less unusual cases is it shifted by him to his house- or land-lord.[1]

In regard, now, to that part of the tax which is due to the structure, that is the tax on building-rent, the case is somewhat simpler.

We have seen that even if an exclusive tax is assessed on the building-owner it will be shifted in great part to the occupier in normal cases of increasing demand. *A fortiore* if the tax is levied on the occupier, it cannot be shifted to the building-owner.

[1]Some of the qualifications of the old doctrine are well put by Cliffe-Leslie in the following passage: "The doctrine by which eminent economists of our own day affect to determine the incidence of rates assumes . . . . that capitalists not only know the past and present profits of all occupations and investments, but foreknow them at remote periods,—to the end of a long building lease, for example. Yet it is clearly impossible for persons contemplating the building or buying of new houses to foretell even for twenty years the profits that single investments will yield. The movements of business and population, the demand for houses and other buildings, the increase of wealth and money, and the general range of incomes and prices, the supply of new houses on the spot, the means of locomotion bringing other districts within reach, all defy calculation. . . . . The truth is that the profits of house property, the rents that can be exacted from occupiers and the incidence of rates, depends on no such fiction as the 'average rate of profits', but on the demand for and supply of houses,—and these conditions vary from time to time and from place to place. . . . . . The constant increase of population, the narrow limits of distance from their business within which it is convenient to most people to live, and the cost and trouble to existing occupiers of removal, give the owner, in most cases, the stronger position, and enable him to throw any increase in the rates on the occupier. . . . . The occupier of the house pays all the rent that can be screwed out of him were there no rate,—and to that extent the rates may be said to fall on the owner, the remainder being borne by the workmen."—"The Incidence of Imperial and Local Taxation on the Working Classes", in "Essays in Political and Moral Philosophy", pp. 207-209.

For a tax paid by the tenant is virtually a special tax. There is no other taxable object which can be put in the same category as rent paid by tenants, unless it be the interest paid by debtors. But we have yet to hear of any attempt to tax creditors by levying a tax on interest paid by debtors. In other words, then, in order to ascertain the actual burden we must add to the nominal rent, at all events, that part of the tax which is theoretically levied on the structure apart from the soil. In the long run the occupier will tend to bear the tax, except in those quarters or under those conditions where the demand suffers a considerable check.

Of course this holds good only on the assumption that the rate of the tax is uniform on all the houses concerned. In so far as the rates vary in different parts of the same town, the excess in any particular case will tend to fall ultimately on the owner, not on the occupier. This is simply one instance of a more general law. For if a prospective tenant on whom taxes are levied in first instance has the choice of two houses of equal desirability but in different parts of the town, the amount of the tax being in one case ten dollars more than in the other, he will certainly choose the latter house or compel the owner of the former to forego ten dollars of the rent. In England the districts within which the rate of the tax is uniform are much smaller than in America, and it frequently happens that different parts of the same city, or even opposite sides of the same street, pay different rates because located in different parishes. In such cases it is fair to make a distinction between the constant and the variable or differential part of the building rate, the latter representing the excess above the rate

uniform in all the districts. Only the constant part of the building rate will fall on the occupier; the remainder will be borne by the building-owner, and in certain favorable cases shifted by him on the land owner. This variable element of the building tax, however, will in general be very insignificant in amount for the reason that even in England the normal differences in the rates in city districts which usually have similar expenses will be exceedingly slight.[1] So that even in such a case it may be said that the building tax will fall almost entirely on the occupier.[2]

[1] The contention of Sargant, "Urban Rating", 1890, p. 49, that the differential rate amounts to two-thirds or even three-quarters of the total tax is utterly erroneous, for the reason that he terms "constant" rate only that part of the tax which is uniform throughout the *kingdom*. This is arbitrary and absurd. In speaking of a differential rate we must always compare two houses of equal desirability or in the same neighborhood—for it is manifestly impossible to say how much of the differential rate falls on the structure, and how much on the plot. We must not compare a house in London with a house in a country parish, because it is not a question of competition between them. The rule holds good only within the narrow range of houses subject to the same competition.

[2] Fawcett's discussion of this question is very unsatisfactory. He makes a distinction between buildings in general and those possessing exceptional advantages of situation. In the former case, rates, he says, are a charge on the occupier, in the latter on the ground-owner. "For if rates were remitted, the saving resulting would simply represent so much added to the ground rent, since rent is fixed by the demand, and the demand would not be altered if rates were remitted." Fawcett's argument can be turned against him, for it may equally well be said that, given a certain demand before rates were imposed, the levy of new rates would not change the rent because it would not change the demand. Hence the rates would fall on the occupier who pays them, and not on the ground-owner, whose rent is unchanged. In fact, Fawcett's whole distinction between these classes of houses is untenable. Every house possesses "certain advantage or disadvantage of situation". The

To sum up it may be said that when the local real estate tax is levied according to rental value and assessed in first instance on the occupier, as is the case in England, the main burden of the tax will rest ultimately on the occupier, not the owner of the premises. For the building tax, as we have seen, will usually rest almost entirely on the occupier. And the building tax forms in almost all cases the larger part of the total tax. The tendency to erect costly structures on valuable sites is indeed not quite so strong in England as in America because of the division of ownership between landlord and house-owner. But the tendency nevertheless exists.

Not only does the building tax normally fall on the occupier but, as we have seen, the ground tax will generally be borne to a very great extent by the occupier. If we add this portion of the site tax to what is practically the whole of the building tax, we see that by far the larger part of the total local tax falls on the tenant. Even on the assumption that the incidence of the tax on structure is hypothetically the same as that of the tax on site, it would still remain true that the tax as a whole would tend to rest in considerable part on the occupier, for the reasons that we advanced above in considering the site tax.[1] The determination of the exact proportions is necessarily impossible. But here again, as in the case

advantages merge into each other in imperceptible gradations. *Cf.* his chapter on The Incidence of Local Taxation in his "Manual of Political Economy", 6th ed. (1883), especially p. 618. On the other hand Ricardo and J. S. Mill fail to make either of the distinctions that I have pointed out in the text, for they maintain that the ground tax falls on the ground-owner, and the house tax on the occupier,—both of which statements are partially incorrect.

[1] *Supra*, p. 127.

of the real estate tax, it may be said that in a prosperous and progressive community the tax will tend to fall chiefly on the tenant, while in decaying and unprosperous districts the tax will tend to fall on the owner,—but in all cases more of the tax will tend to be borne by the tenant when the tax is originally imposed on him than when the tax is assessed on the owner.

It is no wonder, then, that in England the movement for the tax on ground values, assessed on the owner, should now be making such rapid headway. For the English system, with its exemption of the landowner from special assessments for local improvements, and with its casting so large a share of the whole burden on the occupier, is of all systems of direct local taxation perhaps the most inequitable.[1]

[1] In Scotland and Ireland the rates are generally divided between occupier and owner. The same plan is proposed in England.

CHAPTER IV.

INCIDENCE OF TAXES ON PERSONAL PROPERTY, CAPITAL AND INTEREST.

What is called personal property in English-speaking countries includes not only capital in the economic sense, but wealth of other kinds, like money, and consumable commodities not used in production, like books and pictures. Taxes may be imposed either on the property itself or on the revenue derived from the property. Since all taxes are nominally paid out of revenue, it is thus immaterial, so far as the question of incidence is concerned, whether we speak of taxes on capital, or taxes on interest and profits. It has been laid down as a general proposition by a recent writer that "the taxation of property is the taxation of the property-owner."[1] But he simply makes the assertion without attempting to prove it. In reality the matter is by no means so simple as he assumes.

In so far, indeed, as a tax is laid on personal property which is not capital, the tax cannot be shifted. For instance, if a tax is imposed on the permanent owner of luxuries, like pictures or jewels, he and he alone bears the burden. Of this nature are what are known in England as the assessed taxes and in the continental countries as sumptuary taxes. Whatever is held simply for enjoyment and not for sale,

[1]Charles B. Spahr. "The Single Tax": *Political Science Quarterly*, VI, 633.

provided it is not used for productive or lucrative purposes, is not capital. A tax on such property can not be shifted because the property is not sold, and because the property produces nothing which can be sold. Here, indeed, the taxation of property is the taxation of the property owner.

On the other hand the incidence of a tax on capital, or on profits and interest, is somewhat more complicated. We may logically divide the subject into three great heads:

A. An equal tax on all capital or interest.

B. An unequal tax on all capital, or an equal tax on only some forms of capital or interest.

C. A tax on profits.

It is with this last division only that the English economists have hitherto busied themselves, and that in not an altogether satisfactory manner.

A.—An Equal Tax on all Capital.

Let us frankly state at the outset that this is only a hypothetical case. It is the theory of our American property tax. But it is not the practice. And it can never be the practice. Why not?

A tax on capital can be unequal in two ways. There may be inequality in the rate, or there may be inequality in the taxable capital. In other words the tax may be assessed on all capital but in different proportions, or it may be assessed on only some forms of capital. Now an universal tax on all capital is an impossibility in the modern world. It might be true in a completely isolated community, where all the inhabitants employed all their capital within the nar-

row limits of that community. But in actual life it does not exist. Not only does the tax differ from commonwealth to commonwealth, but the field within which capital is employed is as wide as the world; while the efficacy of any tax law is restricted to a particular state or locality. In other words the international employment of capital renders a tax on all capital an impossibility. Only on the assumption that every state in the whole world taxed all forms of capital alike, would we have such an universal tax. But this is plainly untrue, as it is most improbable.

But secondly, even granting that there was such an universal tax, the tax would still be unequal within the limits of any particular state. For even if the state attempted to tax all forms of capital at the same rate, it could never practically succeed. Not only would there always be some forms of capital within the state which would completely evade taxation, as all experience has shown; but furthermore the same legal rate on various kinds of capital would inevitably be a different actual rate. The return of capital is interest. But the rate of interest varies with different kinds of capital, according to the security of the investment, the length of the loan, the state of the money market, and a hundred other factors. For instance, in New York state during the past year the rate of interest has varied from two and a half per cent. on certain prime bonds to a few hundred per cent. on loanable capital in Wall street. The same legal rate of the tax on capital would thus be a very divergent actual rate on the interest. Hence from

whatever point of view we regard it, an equal tax on all capital is an impossibility.[1]

Bearing in mind, then, that an equal tax on capital is only an hypothesis, let us endeavor to ascertain its incidence. The question, of course, can only be between the capitalist and the one who uses the capital, *i. e.* the borrower. The question as between the producer and consumer or purchaser of the commodities is not a question of interest, but a question of profits, and can be better discussed under the third head.

Now as between lender and borrower it is plain that an equal tax on all capital must fall on the lender; that is the capitalist. There would be no way for him to shift the burden. As it is not to be assumed that he would consume his capital unproductively, he would attempt to reimburse himself for the tax either by investing the capital in some business or by lending it to some one else. If he invested it in a business, the demand for loanable capital would decrease as much as the supply. For he would simply be doing what the borrower would otherwise have done. So that the rate of interest would not rise. And if he invested it in fixed capital or land, the rate of interest would certainly not tend to rise. For any large investment in fixed capital would simply set free so much circulating capital, i. e. the purchase price of the fixed capital. So that under either supposition the tax could not be shifted.

Of course there is one case in which the burden of the tax could be partially evaded. If the tax on

[1] Pantaleoni, "Traslazione", 245 is the only writer that I have met with who does not overlook this fact. His whole discussion on this point is very noteworthy.

capital were so exorbitantly high as to diminish the return to the capital below the rate of what John Stuart Mill called the practical minimum, further accumulations would be decidedly checked. An attempt would be made by the employers of capital to improve production to such an extent that the enhanced profits would still give them the same net returns as before. And that is sometimes the result of taxes on capital; they act as a stimulus to improved methods of production. In so far as this is not true, however, further accumulations of capital would be discouraged. But even in such a case it would not follow that the tax would be shifted to the borrower. The loss would be felt by the community at large in the shape of a decline of general prosperity. And it is utterly impossible to state in advance how much of the burden would be borne by any particular class of the community.[1]

B.—An Unequal Tax on Capital.

Let us now leave the realm of hypothesis and assumption, and come to the practical example of every day life in the tax on capital. This actual tax on capital is, as we have seen, everywhere an unequal tax, however equal it may be nominally or ostensibly. The question thus is: What is the incidence of an unequal tax on capital?

This question again has three branches, according as we discuss the incidence as between (1) the original owner and the new purchaser; (2) the present

[1] John Stuart Mill, Book V, chap. 3, § 3, comes to practically this conclusion in discussing the tax on profits. Properly speaking, the argument is applicable to the tax on capital or interest, as stated in the text.

owner and the borrower; or (3) the producer and the consumer. Let us take these up in order.

1.—*The Incidence of a Capital Tax as between Original Owner and New Purchaser.*

This whole subject is governed by the law of capitalization of incidence, which has already been discussed.[1] We need thus only repeat our conclusion. When a new or suddenly increased partial tax is imposed on any species of capital, the tax, if it cannot be shifted to the consumer of the article, will be discounted in a depreciation of the capital value of the article by a sum equal to the capitalized value of the annual tax, and will therefore fall on the original owner of the commodity before the tax was imposed or increased, and not on the new purchaser. In other words, when two classes of capital are taxed at unequal rates, the excess of the tax above the average rate will tend to be borne by the original holder, because the new purchaser pays so much less for the capital on account of the tax. He will otherwise prefer to invest his money in something else which will bring him the usual interest. It is only when the tax is again increased that the present owner is compelled to bear the new burden. But the limitations of the doctrine must not be forgotten.[2] And it is just because of the failure to notice these limitations that some writers have fallen into the error of assuming that a tax on capital is a tax on the capitalist. If a tax could not be shifted, then indeed the

[1] *Supra*, p. 62.

[2] For a fuller discussion of this doctrine as applied to an important class of capital, see my "Taxation of Corporations" in *Political Science Quarterly*, Vol. V, esp. 671–674

excess of any unequal tax, or the exemption from a tax, would be capitalized or amortized into a change in the capital value of the capital taxed. But this "if" is the crucial point; and, as we shall soon see, it is utterly erroneous to assume that the tax can never be shifted.

2.—*The Incidence of a Capital Tax as between Debtor and Creditor or Borrower and Lender.*

In just the same proportion as it is difficult for a capitalist to shift a tax which is imposed on all capital, it is easy for him to shift to the borrower a tax which is imposed on only some forms of capital. That is to say, in the case of an unequal tax on capital, it is generally the debtor and not the creditor who suffers. How can this be proved?

Two sets of arguments might be used to make good this assertion that a tax on loanable capital will increase the rate of interest to the borrower. The rate of interest on capital can increase only through an increase of the demand for capital or through a decrease of the supply of the capital.

Some writers maintain that demand will increase. Thus it is said that if a tax be imposed on the capitalist, and accordingly the borrower be now allowed to deduct from his taxable property the amount of this debt, the borrower will be able to pay a higher rate of interest. Since he is no longer taxed on the debt, he will be able to lay aside more, and thus increase his effective demand for additional capital. Because of this increased competition for capital, the rate of interest will rise, so to to leave the creditor intact, notwithstanding the imposition of the tax.[1]

[1] This is the argument of Kröncke, Grundsätze einer gerechten Besteuerung, 130–138. *Cf.* "his Einleitung zur Regulirung der Steuern", 35.

This argument, however, is utterly inadequate, as Rau has shown.[1] For in the first place it is not necessarily true that the borrower is allowed to deduct his debts. In the American commonwealths it is frequently the rule that debts cannot be deducted from personal property. Secondly, even if debts are deducted, it does not follow that the competition for capital will increase, for only a part of the debts will have been contracted for industrial purposes, while a portion will have been the result of losses or accidents. An amelioration in the condition of the debtor will therefore just as frequently result in a payment of old debts as in a contraction of new debts. Thirdly, if an increase of the debtor's profits (as in the case of deduction of debts) enhances the demand for capital, then every decrease in the rate of interest would do the same, and this increased demand would counterbalance the decrease in the rate, so that interest could never permanently fall. But this is manifestly absurd and untrue. Hence the argument that a tax on capital will increase demand is untenable.

On the other hand, the argument for a decreased supply is more successful. In fact, this is the real basis of the whole theory of the shifting of the capital tax, whether it be a tax on mortgages or on any other form of loanable capital. The argument was first advanced by Turgot,[2] and rests really on the fundamental assumption of the mobility of capital. Capital shows its mobility in two ways. If employed

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[1] Rau, "Finanzwissenschaft", §§ 381-312, Vol. II, pp. 156-157 (5th edition). *Cf.* Pantaleoni, "Traslazione der Tributi", 253-255, who follows Rau.

[2] Turgot, "Observations sur un Mémoire de M. de Saint-Péravy en faveur de l' Impôt indirect." ' Oeuvres" (ed. Guillaumin) I, 423.

unremuneratively, it will be removed or transferred either to some other industry or occupation within the country, which affords higher gains because untaxed, or it will be removed to another country where the same industry or occupation is not taxed. In other words, there is both an internal and an international migration of capital continually going on—a migration from industry to industry, or from country to country.

Capital will always seek to secure the usual returns. Impose a tax on the capitalist lender, and he will insist on an increase of the rate of interest tantamount to the tax, or else transfer his capital to some untaxed occupation, within or without the country.

But while it is abstractly true that a special tax on capital will be shifted to the borrower, it often happens in practice that the assumed absolute mobility of capital is countervailed by other forces—that is, by economic friction. These opposing forces may be classified as follows: (1) ignorance of the capitalist; (2) difficulty of removing the capital; (3) risk connected with the migration to other countries; (4) social or other considerations which make for permanence of investment; (5) legal obstacles. A word as to each of these:

Ignorance of the capitalist, let us confess it at once, is not of very material importance. In a highly developed industrial organism, under the modern régime of interchange of thought and communication of news, the fact of extraordinary profits in any particular occupation cannot be long concealed. And especially the distinction which concerns us here—that between taxed and untaxed capital—must be easily perceptible to the average investor. With the

growth of modern society the ignorance of the investor is a factor of continually decreasing moment.[1]

More important is the difficulty of removing capital to more lucrative employments. Of course, in the case of loanable capital, as in the stock exchanges of to-day, this difficulty is reduced to a minimum. But in proportion as the capital assumes more and more of a fixed character, its mobility grows gradually less. To transfer investments from one stock to another is a very different matter from abandoning all the plant and machinery in one business in order to enter upon another occupation.

The risk connected with investments in foreign countries is likewise not so great as it formerly was. It is indeed true that creditors, as a rule, prefer to be near their debtors. American capitalists prefer the less remunerative mortgages in the East to the high interest-paying investments in the western states. And it frequently happens that home investors or domestic corporations are treated more leniently, both as regards taxation and in other respects, than foreigners. It is the survival of the old law of aliens. But this check on interstate or international transfer of capital is gradually losing its potency.

Social considerations of various kinds often interpose a more serious obstacle. It is not always strictly true, as Adam Smith said, that "the proprietor of stock is properly a citizen of the world, and not attached to any particular country". Feelings of patriotism, of local pride, of desire of proximity to friends, of long custom and old usage sometimes play

[1]For a proof that it is however of some importance, *cf.* Cliffe-Leslie on the Philosophical Method of Political Economy. In his "Essays in Political and Moral Philosophy", 235–237.

a considerable rôle. Although they may be called non-economic motives, they are none the less to be reckoned with by the economist.

Finally the law may prevent the free migration of capital. Under our state bank laws, *e. g.*, there was a very general provision that banks could invest their deposits only in certain specified state securities or mortgages. The large demand for state mortgages contributed toward lowering the usual interest allowed on the mortgage, and thus prevented the whole of the burden of the tax from being shifted to the borrower.

While, therefore, it may be laid down as a general rule that a tax on loanable capital will be shifted from the creditor to the debtor, yet the conditions which interfere with the absolutely free mobility of capital may be sufficiently strong to prevent this transference of the tax from becoming entirely complete. The application of this principle to the great question of taxation of mortgages in the United States is obvious.

3.—*The Incidence of a Capital Tax as between Producer and Consumer.*

This is practically the same as a tax on profits. The investor of capital in a productive industry does not make any but an arbitrary distinction between his interest and his profits on the investment. The rate of interest is fixed by the relative amount of loanable capital, i. e. it is a question between borrower and lender. But as soon as it becomes a question of adding the tax to the price of the goods the problem is the same as that of the tax on profits. And this topic is of sufficient importance to demand a separate chapter.

CHAPTER V.

TAXES ON PROFITS.

In discussing the incidence of a tax on profits as between producer and consumer, it is necessary to make several distinctions. Profits may be taxed directly, as when the tax is imposed on the net receipts or profits of the producer. But profits may also be taxed indirectly, as in the case of a fixed license, or a tax on stock in trade, or a tax on sales. Taxes on sales, however, may themselves be subdivided into two categories. The producer may be taxed on the amount of commodities produced or sold by him. This is equivalent to a so-called indirect tax on commodities. It is immaterial, from the standpoint of incidence, whether such a tax is raised from producer or the consumer. On the other hand the producer may be taxed not on the quantity produced but on the gross receipts from sales—which is manifestly not by any means necessarily the same thing. A tax on gross receipts is also an indirect tax on profits. It is in some sort a cross between a tax on net receipts and a tax on the quantity sold.

Consequently if we use the term profits in the wider sense to signify the revenue which accrues from the sale or exchange of commodities, there are really no less than four chief kinds of taxes, which affect profits and thus influence the relation between producer and consumer. These are:

I. A tax varying with gross production or gross amount sold.

II. A tax varying with gross receipts.
III. A tax varying with net receipts.
IV. A tax of fixed amount.

Before it will be possible to discuss the incidence of any of these taxes or, since profits depend on price, before we can ascertain the influence of taxes on price, it is necessary to notice four fundamental lines of division.

1. A distinction must be drawn between an exclusive tax which hits only one class of commodities or profits, and a general tax which hits all or most of the classes.

2. Commodities must be distinguished according as they are subject to the law of monopoly or to the law of competition. The incidence of taxes on competitive profits is not necessarily the same as the incidence of taxes on monopoly profits.

3. Commodities must be distinguished according as their production is subject to the law of diminishing returns, to the law of constant returns, or to the law of increasing returns.

4. Industries must be distinguished according as all the commodities in the class are produced at practically the same cost, or as some of the commodities are produced at varying costs.

The first two distinctions need no discussion. Their effect will be considered below. The remaining distinctions require a few words of comment.

It is well known that in certain occupations or under given conditions every successive dose of capital or labor applied will give returns of approximately equal amount. The product will be in exact ratio to the amount of capital or labor applied. The more capital, the more product, and *vice versâ*. The

industry is then said to be subject to the law of constant returns. The normal value of the article which is indefinitely reproducible at equal cost would hence tend to be equal to the cost of production, on the assumption that all the articles in the given class are produced at the same cost. But such an assumption is only rarely true in the competitive field. In actual life we do not find all the articles in a given class produced at the same cost, although in a given market they must all sell for the same price. In other words, although the normal market price is always the same, the normal supply price is not the same. The reason for this is twofold.

It has been repeatedly shown that in certain occupations every successive dose of capital applied will give returns, not of equal, but of continually smaller amount. The industry is then said to be subject to the law of diminishing returns. This is nominally true of agriculture and, to some extent, of the extractive industries. It forms the basis of the Ricardian law of economic rent. The law is true also of almost any industry after a certain stage of profitableness has been passed, and when the market will not respond proportionally to the efforts of the producer. On the other hand, the industry may obey the law of increasing returns up to a certain point. In nominally progressive commodities continual improvements are being made in methods of production, while the possession of capital renders its further increase a continually easier task. Moreover, where the proportion of fixed or constant expenses in any industry is large, a considerable increase of production can be made without a corresponding increase

of cost.[1] Successive applications of capital and labor this tend to produce returns which are, up a certain point, increasingly greater in amount. The product is not proportional, but progressive.

Now, whether the law be that of increasing or of diminishing returns, it is evident that the normal value of the articles in the class will be fixed, not by the average cost of production, but by the cost of producing the most expensive article. In other words, normal value tends to equal the highest cost of production. As long as the demand is sufficient to call into being commodities produced at different costs, the price will be fixed by the greatest cost; and those that produce more cheaply, because in larger or smaller quantities, as the case may be, will benefit accordingly.

But secondly, whether or not the industry obey the law of increasing or of diminishing returns, producers inevitably differ in ability or in opportunity. Although all the articles in the same class sell at the same price, and even though the law of returns be the same, the superior skill of some employers, or the more favorable situation of some factories, or the more fortunate combination of external causes, may enable some capitalists to produce more cheaply than others. As the price, again, is fixed by the law of greatest cost, the difference between greatest cost and actual cost, i. e., the difference between the cost of producing the article under the most disadvantageous and under the more favorable conditions constitutes the producer's surplus or profits. Even if the

[1]For an application of this to practical transportation problems, see my "Railway Tariffs and Interstate Commerce Law". *Political Science Quarterly*, vol. II, 226 *et seq.*

industry is subject to the law of constant returns, the profits due to superior skill or good fortune will arise in the same way.

The discussion as to the nature of profits is not yet ended. On the one hand we have the old school, which identifies profit with compensation for work and earnings of management, and lays down the law of normal or natural profits, which are supposed to stand in a close relation to normal or natural interest. On the other hand we have the various modern schools, all of which in a greater or less degree identify profits with surplus earnings, and thus logically deny the existence of any normal or natural profits. There are at least three separate modern schools. The one is that represented by Loria and Nazzani in Italy, and by Marshall in England. They still cling to the conception of ordinary profits as representing in some sense interest and compensation for work, but maintain that the surplus above these ordinary or minimum profits obey the law of rent. This is what Marshall means by quasi-rent, or Loria by surplus-profit (*sopra-reddito*).[1] Secondly, we have the school which generalizes the principle of rent and makes it cover profits and wages as well as agricultural rent. This is the school represented in Germany by Mangoldt, Schäffle and Held, and in the English-speaking countries in part by Senior (who termed rent a fortuitous profit), and in whole by recent writers like Clark and Hobson. Thirdly, there is the tendency represented by General Walker, who identifies all profits with the surplus or rent arising from business management.

[1] Loria, "La Rendita Fondiaria e la sua Elisione Naturale", 1880, and his "Analisi della Proprietà Capitalistà", Book I, 1889. *Cf.* Nazzani, "Saggi di Economia Politica", No. III, Del Profitto, 1881.

The important point for us here is that a large class of commodities—in fact, all competitive articles—are produced under such conditions that the profits—whether in whole or in part is immaterial for our present purposes—represent the result of differential advantages of production. These differences may be summed up under four headings: Differences of situation with reference to the market; differences in the possession of improved machines or processes; differences in the personal abilities of the producer, and differences in opportunity or luck. In other words, in discussing the incidence of a tax on competitive profits, whether direct or indirect, we are dealing with commodities which are produced at varying costs and where the normal value, or the value around which the market price oscilates, tends to equal the cost of these articles of the class produced under the most disadvantageous conditions. There is no such law of natural profits as the old school assumed, simply because the law of cost of production, rightly interpreted, means the law of greatest cost. There may indeed be average profits in the sense of a mean between no profits and maximum profits. But the normal or natural rate of profits does not exist.

In fact it may be said that whenever all the articles in a given class are produced at the same cost, the resulting profits must be monopoly profits and not competitive profits. Monopoly in so far as it exists at all implies exclusive control of the market. As soon as the control is no longer exclusive the ensuing profits are competitive profits. In a state of free competition, that is when the article is indefinitely reproducible, competition between the producers inevitably brings the price down to the cost of produc-

tion of the dearest increment; and it is only because there is a part produced at less expense that profits accrue to the producers of such cheaper part. But as soon as the article is no longer reproducible indefinitely, there is an element of monopoly, because the temporary possessors of the processes of production practically control the market. The price may be driven above the cost of production, and may remain there indefinitely, as long as the supply is necessarily limited. It is true, that a monopoly article may also be indefinitely reproducible, but it will then be a monopoly article only in so far as this indefinite reproduction is controlled by one producer. In other words, competition may be excluded in two ways—either by the fact that no more of the article can be produced, as in the case of a natural monopoly, or by the fact that only one producer controls the production, as in the case of a legal or an economic monopoly. Whether the industry obey the law of constant, increasing or diminishing returns, makes in this respect no difference; it is only in the case of monopolies that all the articles in a given class can be produced at the same cost. Competitive profits imply varying costs of production.[1]

[1]The conception of the laws of constant, diminishing and increasing returns was first noticed by Cournot in his "Recherches sur les Principes Mathématiques", etc., 65. Professor Henry C. Adams refers to the distinction in "The Relation of the State to Industrial Action." But he errs in identifying the last class—that which obeys the laws of increasing returns--with monopolies. The law of increasing returns may be equally true of competitive prices; while on the other hand monopolies may also be subjec' to the law of constant or diminishing returns. Prof. Adams, moreover, makes no application of this distinction to the problems of taxation. Pantaleoni bases his treatment of the taxation of profits on the erroneous distinction of Loria between ordinary profits and

With these preliminary explanations, the application of which will be seen later on, we are now prepared to proceed to the study of our problem proper.

I. Taxes on Gross Production or Gross Amount Sold.

These are practically the same as taxes on commodities Whether the tax is a so-called "indirect" tax, and levied on the commodities, or whether it is levied on the producer according to each unit produced or sold, is utterly immaterial. Thus, in some of the American commonwealths the sewing machine companies or telephone companies' taxes are proportioned to each sewing machine or telephone sold or produced. This is precisely the same, in so far as the question of incidence is concerned, as if an indirect tax had been levied on each machine or telephone.

Let us examine first the case of a special exclusive tax on all articles of a particular class, subject to the law of competition.

The tax must plainly be regarded as an increase in the cost of production. For the time being, of course, and until the old stock is exhausted, those who produced before the new tax was imposed benefit to the

surplus profits; and he fails to recognize the fact that industries in which all the articles are produced at the same cost are necessarily monopolies. This in great part vitiates his whole treatment. Moreover he utterly ignores the distinction between the laws of constant, diminishing and increasing returns. On the other hand Marshall speaks of this distinction ("Principles", Book V, Chap. 7), but makes no attempt to coördinate it with the other laws which he has himself done so much to elucidate. As we have already noted, however, Prof. Marshall reserves the study of incidence of taxation for future treatment.

extent of the ultimate rise in price. But as soon as this interval has elapsed, all producers are on the same footing. Since the tax is an addition to the cost of production they will seek to recompense themselves by raising the price. Unless they succeed in this, their profits will be curtailed. And it will follow either that producers will gradually transfer their capital to untaxed industries, or, even if the transfer of capital is impossible because of its being firmly fixed in the industry, production will nevertheless be curtailed by the crowding out of all those who were previously on the very margin of profitable production, while the tax will prevent the influx of any new capital. Thus in the long run the same result would be produced—relative decrease of supply and, provided the commodity continue to be produced at all, increase of price. The extent, however, to which this is actually true, and therefore the extent to which such a tax will be shifted to the consumer, depends on two important considerations—the elasticity of the effective demand and the law of returns which the industry obeys.

1. If the tax be levied on commodities which the consumers must have and are willing to pay for at any expense, the demand will not decrease. With demand that remains unchanged irrespective of price, the price will rise by just the amount of the tax. The consumer will thus bear the whole burden. Practically, of course, this is true of only a few commodities. But it may be said that in a large number of cases prices may rise considerably without appreciably affecting the demand. Such would be the case with absolute necessaries of life and with high-priced luxuries. The demand for absolute necessaries of

life is not apt to diminish much unless the people starve. The effect of a tax on such commodities would rather cause a diminution in the more elastic demand for comforts, or for the less absolute necessaries. But the demand for absolute necessities depends mainly on the amount of the population, not on the price of the article. Again, in the class of high-priced luxuries, a tax, unless it be exorbitant, is not apt to restrict the consumption. Those who are generally willing to buy such luxuries are not apt to be held back by an increase of price.

In fact, it may be laid down as a general rule that in the case of absolute necessities, as of expensive luxuries, great alteration of price goes hand-in-hand with slight variation in demand, while in the case of moderate comforts small change of price is accompanied with considerable variation in demand.[1] In cases then of articles like by absolute necessities and some expensive luxuries there will be no migration of capital from the industry, because profits will tend to remain at the old figure. The tax will in the extreme case be shifted in its entirety on the consumer.[2]

[1] Most writers like Walras, "Eléments d'Economic Politique Pure", 2nd ed., 519, fail to make this distinction, and set luxuries in general over against necessities in general. Yet Cournot had already called attention to the similarity between great luxuries and indispensable necessities in his "Principes Mathématiques", *etc.*, pp. 162–163, and in his "Principes de la Théorie des Richesses", 306.

[2] Pantaleoni, "Traslazione", 115–116, erroneously asserts that when the limit of effective demand has not been reached the tax will be divided between producer and consumer. His argument is that since the producer's profits are decreased he will transfer his capital to other industries. This great addition of capital will decrease profits all around, in the taxed as well as untaxed industries. Thus the producer will get less profits than before. The answer to this is simply that there is no reason why the capital should be trans-

2. If on the other hand the price of the commodity before imposition of the tax had already reached the limit of the effective demand, an attempt to increase the price by any portion of the tax would totally annihilate the demand. The commodity must be sold at the former price or not at all. Demand again, as long as it exists at all, does not change, and with unaltered demand price cannot rise. In such a case the tax could not be shifted at all. The whole weight of the tax would fall on the producer. This, in the long run, would involve a decrease in the production of the commodity. The old producers would lose, and no new capital would be invested. But even if the supply is diminished the price cannot increase, since by the supposition consumers will prefer to abandon the consumption rather than pay an increase of price. The net result would be a cessation of production with the intermediate loss to the owners of fixed capital in the business. Under no circumstances could the tax be shifted.

3. If, finally, the demand is elastic, as in the case of minor luxuries and all comforts—that is, of the general mass of commodities—in the sense that the old price before the imposition of the tax fell below what the consumers would at a pinch be willing to pay, but on the other hand that the new price, with the tax added, would exceed what certain of the consumers, at all events, can afford to pay, the tax will be divided between consumer and producer. The proportions in which this division will take place

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ferred at all. As long as the limit of effective demand is not reached the producers will not have their profits curtailed, because they can increase the price by the tax. Pantaleoni's whole argument thus falls to the ground.

will then depend mainly on the elasticity of the demand. Given, however, a definite elasticity of demand, the proportions of the division between producer and consumer depend on another set of considerations, viz.: whether the industry obey the law of constant, increasing or diminishing returns. Let us analyze them separately.

If the industry is subject to the law of constant return, so that the cost of production is the same for all irrespective of quantities produced, the tendency of the producer will be to add the entire tax to the price. But as this would decrease sales, he will increase the price by something less than the full amount of the tax. If the demand will fall off greatly with every increase of price, or in other words if the margin of effective demand is very small, the price will be increased by much less than the amount of the tax and the producer will suffer the most loss. Conversely, if the demand is not so elastic,—if an increase of price will produce only a small decrease of demand—almost the whole of the tax will be added, and the consumer will suffer more than the producer. But as long as the gradual decrease of the demand is fixed and ascertainable, the increase of price will bear a definite proportion to the amount of the tax.

If, however, the industry obeys the law of diminishing returns—when every additional increment of production costs relatively more—the tendency of the producer will be to add less of the tax to the price than in the preceding case. For as soon as he adds any given part of the tax to the price he will decrease consumption. But if he produces less, each unit will on the supposition of diminishing return

cost him less than before. Since price is fixed by cost, the price will now be lower than before. In other words, the producer will tend to raise prices as little as possible, and will thus bear more of the tax himself. Whether the demand be more or less elastic, the consumer will bear less of the burden than in the preceding case of constant return.

Finally if the industry obeys the law of increasing return—when every increment in the amount produced costs relatively less—the producer will tend to add more of the tax to the price of the commodity. For the increase of price consequent on the tax will tend as before to decrease consumption. But decreased consumption will now increase the cost per unit produced, and this increased cost must inevitably bring about an enhanced price. The producer at the margin of production will thus be apt to add more of the tax to the price, than if the industry obeyed the law of constant return. The consumer will bear a larger proportion of the loss than before. Whether the consumer's loss will be absolutely more or less than the producer's will depend as before on the elasticity of the demand. But the consumer's loss will be relatively more than in the case of either constant or diminishing return.

We may, therefore, sum up this part of the discussion by saying that the degree to which a tax will be shifted on the consumer will vary inversely as the elasticity of the demand, and directly as the ratio of product to cost. Whether the tax will be shifted in its entirety, in part, or not at all, depends on the article itself and the nature of the industry on whose product the tax is laid. The effect of a bounty, and the degree to which its benefits accrue to producer

and consumer, *i. e.* its incidence, will, of course, be exactly the reverse of the effect of a tax.

If we wish to analyze the further effects of the shifting of such a tax on gross product or on commodities in so far as the ultimate economic effects are concerned, an interesting field is open to us.

If we regard the revenue of the community as a whole we may distinguish, with Cournot, between the real and the nominal revenue, and say that the imposition of a tax may effect a diminution of production and thus of real revenue, while the nominal revenue of society may be either increased or diminished, as the case may be.[1] The distinction can best be explained by an example. Suppose that the price of the commodity was originally $10, at which price 10,000 pieces were sold. Now, a tax of $2 is imposed, all of which is shifted to the consumer. At the new price $12, however, only 8,000 pieces will be sold. The total returns to the producer thus decrease from $100,000 to $96,000, a loss of $4,000. Now the effect on the consumer is also marked. The 8,000 permanent consumers each pay $2 more, which they would otherwise have devoted to the purchase of other goods, that is $16,000. On the other hand the 2,000 old consumers now spend their $10 in something else, that is a total of $20,000. The total sum then devoted to other purchases is $20,000—$16,000=$4,000, a sum equal to the loss of the producer of the taxed article. Since, however, the permanent consumers now pay $96,000 for what they formerly bought at $80,000 there is a real loss of $16,000. The producers also lose $4,000, as has

[1]Cournot, De l'influence des prix sur les revenus, "Principes", *etc.*, 297.

been said. Thus the diminution in the real revenue is \$16,000+\$4,000=\$20,000, while the diminution in the nominal revenue is \$4,000. In such a case then there is a diminution in both real and nominal revenue.

But if the conditions of elasticity of demand were such that 9,000 pieces, instead of 8,000, would be sold at the increased price of \$12 the matter is different. In this case the nominal revenue would have increased by \$8,000, since the producer now obtains \$108,000 instead \$100,000, But the permanent consumers now pay \$18,000 (9,000 x 2) more than before. If we deduct the producer's gain from the consumer's loss we have a net real loss of \$10,000. Thus in this case while there has been an increase in the nominal revenue, there has been a decrease in real revenue. The effect of a bounty would be just the reverse of a tax. There might be a diminution in the nominal revenue with an increase or a diminution in the actual revenue of society.

Another interesting point, of some practical importance, is the relation between the gross proceeds of the tax and the loss occasioned to the consumers as a class in all those cases, of general occurrence, where the price is increased by reason of the tax.

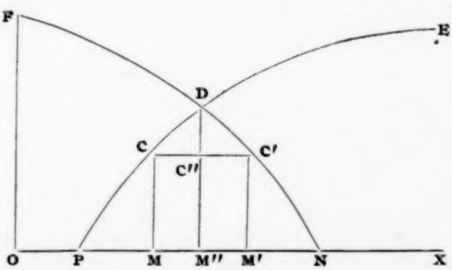
In the case of an industry which obeys the law of constant returns, the proceeds of the tax plainly equal the loss to those that consume the article. If, however, we introduce the idea of what Marshall calls the consumer's rent, *i. e.*, the gain that accrues to the consumer in buying for a given price what is really worth more to him, the matter is a little different. The proceeds of the tax will then be less than the loss of consumer's rent. For the permanent consumers, as has been said, lose what the tax brings in,

while the former consumers, who are now unable to consume, have also suffered a loss, but pay nothing to the state.

But if the industry obey the law of increasing return, the loss to consumers is still greater. For the increased price due to the tax diminishes the production, and at the same time increases the cost of each article produced. Thus the price will rise by a much larger proportion of the tax. The permanent consumers alone will, therefore, lose more than the proceeds of the tax, while the former consumers, as before, also suffer a loss.

Finally, if the industry obey the law of diminishing returns, the loss to the consumers will be less than in the case of constant returns, and may or may not exceed the proceeds of the tax; for, although the tax would tend to increase price, the diminution in sales will decrease the general cost, so that the price may increase by something less than the tax. Whether or not this is true, depends on the height of the tax as compared with the diminution in the cost of the production.[1]

[1]The above reasoning may be illustrated graphically as well as arithmetically. Fleeming Jenkin, "On the Principles which Regulate the Incidence of Taxes". (Proceedings of Royal Society of Edinburgh, Session 1871-72, p. 624), made use of the following diagram:



(See explanation of diagram on next page.)

There is one important point in which almost all writers have committed a great error. Cournot maintained that a tax, whether on a monopoly or a competitive commodity, may raise the price to an extent greater than the amount of the tax. The reason he advanced for this phenomenon was that the price paid by the consumer must include not only the tax, but the interest on the sum necessary to pay the tax, and the profits of the middlemen. Hence the necessary conclusion that it is always wiser to assess the tax at as late a stage as possible—that is, on the consumer himself—since the collection of the tax becomes more costly, more vexatious, more burdensome to the community in proportion as the assessment of the tax approaches the producers. The con-

F N is the demand curve, P E the supply curve, *C C′* the amount of tax per unit. Then OM is the market price to the supplier, OM′ the market price to the buyer, and *M M′* the tax.

The amount raised by the tax is *M C C′ M′*, the portion paid by the seller *C C″ M″ M*, the portion paid by the buyer *C″ C′ M′ M″*. The whole loss to the consumer is *M C D C′ M′*; the loss to the sellers C D M″ N, the loss to the buyers M″ D C′ M′. Both buyers and sellers suffer a loss beyond the tax. The sellers suffer a loss C C″ D; the buyers suffer a loss C′ C″ D. If the tax is large C C′ will approach the axis O X. Then the tax will be unproductive, and the excess of loss to buyers and sellers, C C″ D, will be large. Of course, if the industry obeys the law of constant return, or of increasing returns, the supply curve P E will be parallel to O N or curved the other way. Conversely, according to the elasticity of the demand, the demand curve FN will tend to be parallel to EO, Mr. Jenkin did not modify his figure to meet these conditions. But Professor Marshall, who has adopted the idea, has made the necessary changes in the diagrams in his "Principles of Economics", pp. 446–449, to which the reader is referred.

Marshall, however, applied his diagrams only to consumers' rent, *i. e.* to what Jenkin called C′ C″ D. Of course it is equally applicable to the producers' rent. The whole analysis is already outlined by Cournot in his "Principes Mathématiques", 78–82, and more especially in his "Principes de la Théorie des Richesses", 374–378. He

sumers will have to pay more than the government receives.[1]

This theory, which Cournot invested with elaborate apparatus of mathematical diagrams, is, however, nothing but the accepted doctrine of Adam Smith, Ricardo and Mill. Adam Smith puts the idea into the plainest form when he says:

"A tax upon these articles [necessaries of life] necessarily raises their price somewhat higher than the amount of the tax, because the dealer, who advances the tax, must generally get it back with a profit. His employer, if he is a manufacturer, will charge upon the price of his goods this rise of wages, together with a profit, so that the final payment of the tax, together with this exchange, will fall upon the consumer. The final payment of both the one and the other [taxes on necessaries and on labor] falls altogether on themselves [the consumers,] and always with a considerable overcharge."[2]

So also this is what Ricardo means when he says that "the taxing of all commodities will raise the price by a sum at least equal to the tax,"[3]—a remark which, as we have seen, is by no means necessarily

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uses both algebraic formulæ and mathematical diagrams. In fact, here as in so many other questions of pure theory, the quantitative relations can best be analyzed by the mathematical method. But this method alone is not sufficient to give the practical results which it is the object of these papers to attain.

[1]Cournot, "Principes Mathématiques", 78 (as to monopolies). "Principes de la Theórie des Richesses", 273 (as to competitive articles).

[2]"Wealth of Nations", Book V, Chap. ii, Rogers' Edition, Vol. II, p. 468–470.

[3]"Principles of Political Economy and Taxation". Chapter 17, p. 186 (McCulloch Edition). *Cf.* Mill, "Principles", Book V, Chap. iv, § 2.

true. So DuPuynode, Parieu and many other writers make the same mistake. Fawcett calls this the most serious objection against taxes on commodities.[1]

This whole theory rests on the old doctrine of normal or natural profits. As soon as we remember that, according to the modern theory, profits are simply the surplus over market cost, the doctrine falls to the ground. The middleman cannot add his profits to the price, because in a state of competition price is always fixed by the cost of the most expensive increment, *i. e.*, in the case of the middleman by the no-profits middleman. If there were such a thing as natural profits, of course the price of the article would be increased in each transfer, until the ultimate price might immensely exceed the tax. But it is always the producer or middleman on the margin of production, *i. e.*, he who produces or handles the product without profits by simply getting back his expenses, that fixes the price. The profits are obtained only by the more fortunate or skillful individuals. The mere fact of the transfer of the product through a number of hands cannot in itself possibly raise the price by more than the exact cost of such transference, and cost does not include profits. Cost is the condition of profit. Otherwise retail prices would increase geometrically, according to the number of retailers, which is plainly absurd. The tax is simply an addition to cost of production, and there can be no geometrical increase in the tax. As soon as we abandon the natural profits theory, we see how impossible is the excess-of-price-above-tax

[1] Du Puynode, "De la Monnaie, du Crédit et de l' Impôt", II, 210; Parieu, "Traité des Impôts", I, 165; Sayer, "The Income Tax", 1833, p. 58-59; Fawcett, "Political Economy", 550-551 (6th Edition).

doctrine. The doctrine assumes not only that the producer is a monopolist, but that every middleman is a monopolist also. Only on this assumption can there be no no-profits middleman. But the assumption is not a practicable one in actual life.[1]

There is, indeed, one way, but only one way, in which the price of an article may be driven up beyond the amount of the tax—a way, suggested in the last sentence, but owing to reasons very different from those advanced by Adam Smith and Cournot. Since a tax on production or on commodities must generally be advanced before the producer has received payment for his sales, the necessity of raising the funds will bear more heavily on the smaller producers. In fact, under given conditions of elasticity of demand, such a tax, especially if it be a high tax, tends to increase the advantages of the powerful producer. When the conditions are sufficiently favorable, the imposition of a tax may thus be the direct cause of the creation of monopoly. It is, thus, directly the monopoly, and indirectly the tax, which enables the producer to raise the price far above its previous amount. Conversely the repeal of a tax may reduce the price by an amount far greater than the tax, because what was formerly a monopoly now becomes subject to competition. As a glaring example of this tendency may be mentioned the tax on matches in the United States during the Civil War, the imposition of which created a monopoly, and the abolition of which caused a fall in price considerably greater than the amount of the tax. So again we find that the proposed reduction of taxes

[1] *Cf.* Gunton, "Principles of Social Economics", 380. His conclusions are in other respects, however, questionable.

on certain commodities like tobàcco is opposed in in the United States by the large manufacturers and importers. The higher the tax, the greater the advantage of the large dealer. But it is primarily because of the monopoly, and only indirectly because of the tax, that prices are raised thus unduly. And this brings us to the next branch of our investigation.

Up to this point we have been considering only those commodities subject to the law of competition. How does the matter stand with articles subject to the law of monopoly?

In most respects the law of monopoly value is different from that of competitive value. The monopolist will always demand the very highest price at which he can sell the greatest number of products. He will be entirely uninfluenced by the fact that the article can be produced more cheaply—a consideration of vital importance in the whole domain of competitive prices. But in as far as concerns the incidence of the particular tax with which we are at present dealing—namely, the tax on gross production or on commodities—the monopolist and the competitive producer are subject to practically the same influences.

If a tax is imposed on every article produced, the monopolist may prefer to restrict his production and raise his price. Although he will sell less than before, because of the increased price, yet his net profits may be larger because he pays a smaller tax than he would if he produced more extensively. Although his gross receipts diminish, his expenses diminish still more. If the tax is small and the demand apt to fall off a great deal with increased price, the monopolist will be likely

to find it profitable to bear the tax himself. If, as is generally the case, the demand be more stable, he will be apt to shift more and more of the tax to the consumer, for the reason just explained. The degree to which he will add the tax to the price depends chiefly on the height of the tax, as compared with the extent of the production and the elasticity of the demand. And, of course, the same qualifications are to be introduced as before, according as the monopoly industry obeys the law of the constant, diminishing or increasing returns.

The important point to be noticed is that in the case of taxation of gross product the monopolist may, and generally will, shift the tax to the consumer. We shall see very soon that in the case of other taxes there is a sharp line of distinction between monopoly price and competitive price, as regards the question of incidence.

The whole question of the incidence of import or export duties is virtually identical with the one discussed in the preceding cases. It will be readily seen, therefore, how erroneous is the doctrine of those extremists who maintain that the loss to the consumer is measured by the proceeds of the import duties. On the contrary, it may often happen that prices increase something less than the tax, and in certain cases that prices do not increase at all. When the foreign producer fears that the increase of price by the total amount of the tax will so materially reduce his sales as to render his net profits lower than they would be if he assumed a part of the tax himself, prices will rise by something less than the tax. In the recent case of the McKinley tariff, *e. g.*, we have seen that the price of imported

Sumatra tobacco has risen by only a fraction of the tax. The foreign producer has voluntarily assumed the greater part. On the other hand, again, it may, of course, happen that the loss to the consumer will be more than the amount of the tax. It is impossible to lay down any exact and universal rule apart from the given conditions of the particular case. The general tendency is that represented in the conclusion mentioned above.

II.—Taxes on Gross Receipts.

A tax on gross receipts must not be confounded with a tax on sales (in the sense of a tax proportional to the number of commodities sold), or with a tax on gross product. A tax on sales or on product varies with the amount sold or produced. But gross receipts may be larger with small sales than with large sales, provided prices are higher. In such a case a tax on gross receipts would vary just inversely as a tax on the gross amount sold. Conversely, gross receipts may be smaller with large sales than with small sales, provided prices are lower.

If we take up first the case of a monopoly, it is plain that a tax on monopoly gross receipts can never be shifted. We must remember that the price of a monopoly article will always be such that the greatest number of commodities can be sold at such a price as to afford the maximum monopoly revenue. Let us suppose that the monopolist has been selling 1,000 articles at $1.00, giving him gross receipts of $10,000, receipts which form his maximum monopoly revenue. Now a tax of ten per cent. is imposed on gross receipts. Let us assume that the monopolist will attempt to add the

whole or any part of the tax to the price and charge any sum between $1.01 and $1.10. Now at any of these prices he will not get quite $10,000 gross receipts, and certainly not more than $10,000, for otherwise he would have advanced the price already before the tax. Suppose, to give him the benefit of the doubt, that he now sells $9,990 worth. Since he must pay $99.90 tax this would leave him only $9,890.10, while if he continues to charge only $1, he would still have $10,000—100=$9,900. Thus it will be profitable for the producer to bear the whole burden himself. The tax cannot be shifted to the consumer, either in whole or in part.[1]

In the case of competition, however, the incidence of the tax is different. In the case of competition there can be only one price in the market—the price fixed by the cost of the production of the dearest increment of the necessary supply. Now, a tax on gross receipts necessarily increases the expenses of this dearest increment. The producer at the margin of profitable production—that is, the producer whose cost fixes the price, and whose gross receipts afford him only a bare return for his outlay, without any profits—this producer must add the tax to his price, for otherwise his gross receipts, with the tax deducted, will involve him in positive loss. In the long run, therefore the tax must be shifted, but the extent to which the tax will be shifted at any particular time will depend, again, on the very same considerations that were discussed in the case of a tax on gross product, *i. e.*, on the elasticity of demand,

[1] Most writers, including Marshall ("Principles", 460) and Pantaleoni ("Traslazione", 76), overlook this, and confuse a tax on gross receipts with a tax on sales or amount produced.

and the relation of product to cost. In other words, while the incidence of a tax on monopoly gross receipts is the opposite of that of a tax on sales, the incidence of a tax on competitive gross receipts is the same as that of a tax on sales.

III.—Taxes on Net Receipts or Profits.

In the case of a tax on the net profits of a monopolist, it might be assumed that the tax will always be shifted to the consumer, because of his necessary dependence on the monopolist. But this assumption is completely false. It makes no difference whether the monopolized commodity is one the supply of which is strictly limited, and which is not reproducible at all, or whether the commodity is reproducible according to the law of constant, diminishing or increasing returns. So far as the producer is concerned, he cannot possibly add the tax to the price; for it is to be assumed that the monopolist producer will always demand the highest price which the consumer is willing to give. If the consumers were willing to pay more, he would have increased the price already before the imposition of the tax. In other words, monopoly price is always at the point of greatest monopoly profits. A tax on these profits can never increase price, because such increased price would no longer be consistent with the maximum monopoly revenue. A tax on monopoly profits must, therefore, fall wholly on the monopolist.

In the case of competitive net receipts, we must distinguish between an exclusive and a general tax on profits. A tax on the profits of some particular occupation must, in the long run, be shifted to the

consumer, provided that the commodity continue to be produced at all; for if the tax rested on the particular profits, the producer would be put at a disadvantage as compared with those engaged in other industries. There would be a gradual migration of capital to find the most profitable level, and the original industry would gradually be deserted. In the long run, therefore, either the tax will be shifted to the consumer, or it will lead to a cessation of production. In the one case, consumers suffer through increase of price; in the other case, they suffer through destruction of consumption. But in no case will the burden ultimately rest on the perpermanent producer.

But we must not forget the following important practical point, which has been entirely overlooked by the classical economists. In so far as the theory of mobility of capital is not applicable, "the long run" will not occur. When the fixed capital forms a large part, and the circulating capital a small part, of the entire investment, the only method in which a final equilibrium can be brought about is through the ruin and disappearance of the producer. Even where the transferability of capital holds good as a doctrine, the intermediate effects are often precisely the important ones. What may be in a sense unimportant from the standpoint of national economy, may be supremely important from the standpoint of individual economy. The word producer is used in two different senses. When we say that taxes cannot in the long run remain on the producer, we generalize the conception. The producer is not any actual individual, but represents a class or a set of individuals who never die or disappear. But when

we speak of a producer during any interval, we refer to certain individuals. The welfare of producers as a class is something very different from the welfare of an actual producer. Producers as a class may contrive to obtain certain average returns, but it may be possible only through the complete ruin of the actual individuals who are now engaged in production. And in so far as inequalities of taxation are not constant inequalities, the process will continually repeat itself. The optimistic theory is as out of place here as it is in the other domains of economic science.[1]

In other words, even an exclusive tax on profits may at any given time rest on the original tax-payer, and can often not be shifted by him to the consumer.[2]

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[1] *Cf. supra*, p. 101, the discussion of the incidence of the tax on the net profits of land.

[2] The qualification to the general doctrine as to the incidence of exclusive taxes is admirably expressed by Cliffe-Leslie in the following passage: "Another incidence of a number of taxes on the working classes as producers has been concealed by the doctrine that taxes on particular commodities and particular employments fall on consumers only, not on producers. The theory of taxation abounds in examples of the danger of the abstract and hypothetical method of reasoning in economics. The economist sets out with an assumption surrounded with conditions and qualifications, perhaps itself open to the question, such as that in the long run, and in the average, the profits of different occupations tend to equality, and presently forgetting all his qualifications and conditions, concludes that the profits of individuals must be equal, and therefore all special taxes advanced by the producer must come back to them with equal or average profit. Individual profits really, in almost every business, vary from enormous gains to absolute loss. Mill says 'that equal capitals give equal profits, as a general maxim of trade, would be as false as that equal age and size give equal bodily strength.' Nevertheless it is taken for granted that every special tax on a business is received 'with average profit,' though the net result of all a trader's advances is not infrequently ruin; though all such taxes give an advantage to the larger capitalists. . . . ."

The Incidence of Imperial and Local Taxation on the Working Classes. In "Essays on Moral and Political Philosophy", p. 196.

A general or universal tax on profits in the sense of an equal tax on profits does not, strictly speaking, exist any more than an equal or general tax on all capital.[1] But the tax may practically affect so many classes of producers in a given community, and so many different kinds of profits more or less removed from liability to competition from foreign sources, that we are justified in setting up the conception of a general tax, as over against an exclusive tax, on profits.

A general tax on net profits can never be shifted. If profits represent the surplus above cost of production a general tax on this surplus cannot influence the cost of production. Price cannot be altered, and the interests of the consumer cannot be affected. It is the producer who bears the tax, both immediately and ultimately.

Some writers, indeed, like Cournot, have asserted that the ultimate effects on the consumer may be bad, because the tax restricts the producers' consumption, and because the employment of the proceeds of the tax is generally less profitable than if the proceeds had remained in the hands of the producer. But this reasoning is very defective. It takes for granted that taxes are used unproductively, and it logically leads to the aphorism of Say that the best taxation is that which is least in amount. In so far as governmental expenditures are necessary and judicious, they are useful and productive; and it is entirely gratuitous to assume that private expenditure is more beneficial than public expenditure. Everything depends on the nature of the expenditure, and the general views as to the duty and limits of governmental activity. To say that a tax on profits is injurious to the consumer

[1] See *supra*, p. 137.

is a total begging of the question. The whole question, moreover, is not peculiar to a tax on profits, nor is it any longer a problem of incidence; it belongs properly to the wider discussion of the general influence of taxation.

One practical inference from the above discussion may be used in connection with the controversy in the United States as to whether corporation taxes should be levied on gross or on net receipts. In the case of pure monopolies it makes, as we see, no difference, in so far as the result on the consumers is concerned; but in the vast majority of corporations, the *a priori* conclusion in favor of a taxation of net receipts[1] is strengthened by the results of this discussion. Even in the particular case of transportation companies, where many of the charges are still competitive charges, it is far more likely that the travelers and shippers will feel a tax on gross receipts, than they would a tax on net receipts.

IV.—Taxes of Fixed Amount.

It may happen that a tax is assessed neither according to net profits, gross receipts or sales, but that it is imposed in the shape of a lump sum on all the producers in the industry. That is the common, although not the universal, rule with the American license taxes. No matter how large the profits, the tax remains the same.

In the case of a monopoly, such a tax necessarily falls on the monopoly profits. The tax cannot be shifted for the very same reasons that were advanced

[1] See my article on "The Taxation of Corporations", *Political Science Quarterly*, Vol. V.

above in the discussion of a tax on monopoly gross or net receipts. It is always the monopoly revenue that suffers.

In the case of competition, the tax is a condition precedent to production. It might be inferred that the tax would therefore be an addition to necessary cost of production, and that it would hence be shifted to the consumer. But this is not the case. For we have already seen that a tax on gross product favors the large producer. Much more inimical to the small producer is a tax of fixed amount. For the large producer would here pay absolutely no more than his small competitor. Hence, provided the commodities are reproducible to any extent, the large producer would prefer to assume the tax and recoup himself by capturing the customers of the smaller dealer. The minor producer who is thus unable to add the tax to the price will be crowded out of existence. Thus the fixed license tax, provided it be high enough, will tend to be borne by the producer, until, indeed, the gradual trend toward monopoly, fostered by the tax, may produce a rise of price, and thus affect the interests of the customer. But here again it would be only indirectly the tax that would produce the rise of price. But it may frequently happen that the price will not rise at all, the increased sales of the fewer producers compensating them for the tax which they pay. In such a case as this, the incidence of the tax may in a certain sense be declared to be neither on the consumers nor on the producers who continue to produce permanently after the imposition of a tax. The whole tax is discounted and borne by the unfortunate producers who are crowded out of existence. Thus the system of high liquor licenses in the

United States does not necessarily result in any increased price to the consumer, but in a diminution of the saloons and the gradual monopolization of the trade into the hands of the wealthier individuals. The producer always pays the tax. The consumer may or may not be affected ultimately.

Of course when the so-called license taxes are not fixed in amount, but vary with gross receipts or gross produce or net profits, the incidence is governed by the rules laid down in the preceding paragraphs. The word "license" covers a multitude of very distinct taxes.

If we sum up the preceding discussion we find that the incidence of a tax on monopoly revenue is always on the producer, except in the case when the tax is proportioned to the amount produced; that a general tax, whether fixed or proportional to competitive net receipts, rests on the producer; and that a round-about tax on competitive profits in the shape of a tax on gross receipts or gross produce may or may not be shifted to the consumer, in the sense that the shifting will vary inversely as the elasticity of the demand and directly as the ratio of product to cost—with the chances in the great majority of cases that the whole, or almost the whole, of the tax will be so shifted.

This conclusion may not be satisfactory to the sticklers for precision or "natural laws" of incidence. But it will be sufficient to show the delicacy of the problem, and to prove how superficial is the optimistic or general diffusion theory.

If we wish to draw any inferences as to existing problems in the United States, they will be as follows:

The so-called "business" taxes are not necessarily any more "direct" taxes than the national internal revenue taxes.

Taxes on pure monopolies should not be levied on gross product if it is desired that they should remain on the monopoly.

Taxes on corporations should be levied on net receipts rather than gross receipts or other elements if it is not desired that the taxes should be shifted to the community.

Business taxes in general, including the so-called license taxes, should be levied according to net receipts. The so-called license taxes, when of fixed amount, further the trend to monopoly, and when graduated according to sales tend to be shifted to the consumer.

Internal revenue taxes, like import duties, tend to be shifted to the consumer. But the degree to which they will be shifted depends on the three points: (1) whether the business is of a monopoly or competitive nature; (2) whether the elasticity of demand is great or small, and (3) whether the relation of product to cost is constant or not. There is always a possibility that a portion of the tax may rest on the producer.

The application of the general principles of profits taxation to land, houses, debts and mortgages has already been made in preceding chapters, and needs no further discussion.

CHAPTER VI.

TAXES ON WAGES.

It has been customary since the time of Adam Smith to make a distinction between the wages of ordinary labor and what he calls "the recompense of ingenious artists and men of liberal professions". Let us take up first the incidence of a tax on the latter class. Adam Smith maintained that a tax on such skilled employments would be shifted, because this recompense "necessarily keeps a certain proportion to the emoluments of inferior trades.[1] Unless their recompense increased by the amount of the tax, these professions "being no longer on a level with other trades, would be so much deserted that they would soon return to that level".

On the other hand John Stuart Mill maintained that all the skilled and privileged employments are taken out of the sphere of competition by a natural or conferred monopoly, and that a tax will always fall on them because they have no means of relieving themselves at the expense of any other class.[2]

Which of these two statements is correct? It would seem that in the main Mill is right, although his reasons are not above criticism. It is true that the earnings of professionals are in general regulated by custom rather than competition. And for a large class the superior earnings must be regarded in the

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[1] *Cf. supra* p. 33.

[2] Mill, "Principles", Book V, Chapter iii, § 4.

light of quasi-rents, as Marshall terms them. A great prima-donna, an eminent surgeon, a famous lawyer, will not receive or charge more for their services if a tax be imposed on the class to which they belong. A tax to them simply means a burden which cannot be shifted. Their earnings would be the same if the tax had not been imposed. Moreover, the whole class of professional workers is in many respects subject to influences of a more or less uneconomic kind. Their motive is frequently not pecuniary gain, but something higher. An actor, a painter, a doctor, a lawyer often adopts his profession with other objects in view than simply making his living or obtaining the greatest possible income. It is not so long ago that the recompense to certain professionals, like doctors, was regarded simply as a gratuity, not as a stipulated or legally enforceable sum. But even if we regard them from the purely economic standpoint we cannot say that their recompense bears any necessary proportion to common wages. The earnings of the liberal professions are not dependent on cost of production. It is only by a perversion of words and facts that we can consider the time and efforts spent in educating a member of a profession as a capital which must bring in so much interest. In fact, the universal outcry now is the overfilling of the professions, not because of the hope of greater earnings but because of compulsory education and general social conditions. The forces which keep the price of labor in general at a certain level do not operate with equal effect in this case. The price of labor in professional occupations, in short, is not competitive, but either customary or monopolistic.

The whole class of salaried public officials are in a similar category. For governmental salaries depend primarily on the relative desirability of governmental service and on the consideration of imagined political expediency. They may be highest in countries where the usual level of wages is lowest. And even if it were not so, it would be hard to say on whom a tax on official salaries could be shifted. Not on the employer or government surely, because the government does not enter the market as a producer, or according to any commercial principles. If the tax be sufficiently high to render the position undesirable, it may result in less efficient, and therefore in the long run more expensive, work. The community at large will suffer from a poor civil service. But the tax as such cannot possibly be shifted.

When, however, we come to the ordinary wages of the common artisan, whether skilled or unskilled, the matter is not so simple.

We have seen that the absolute theory of Ricardo and his followers maintains that a direct tax on wages would fall on profits, because wages are necessarily fixed by the cost of living or the standard of life. But in the course of our sketch of the history of the doctrine, we learned some of the objections made to this theory. The objections may be summed up as follows:

1. It is assumed that laborers will not consent to accept a reduction in their standard of life. But this is entirely a question of power between the wage-earner and the employer. It is impossible to say in advance who will win. If wages were actually fixed by the bare minimum of subsistence, then, indeed,

a tax on wages would necessarily be shifted; and although Ricardo was not, properly speaking, a believer in the iron law of wages, yet he makes use of this very argument to prove his point. The fact is that wages nowhere are at this point of bare sbsistence. The standard of life is everywhere above this limit. And there is no convincing reason for supposing that a tax may not encroach on the surplus between this limit and the actual standard of wages. The standard of life is not something fixed and adamantine. An irruption of low-priced immigrants would inevitably lower the standard of life and the general rate of wages, other things being equal. So also a tax on wages which would, at all events at first, fall on the laborer might equally well lower his standard of life, by making it impossible for him to procure the conveniences to which he had previously been accustomed. The wage-earner would, of course, strive to reimburse himself through higher wages. But there is no reason why the employer should be compelled to acquiesce. If that were true, no reduction of wages would ever be possible, because a reduction of wages always implies a lowering of the standard of life. Whether or not a tax on wages will be shifted on profits, even in the long run, depends entirely on the relative strength of the labor organizations or on the other conditions the existence of which may compel an increase of wages by the amount of the tax. Whenever these conditions are not present—and they are frequently absent—the tax will rest on the wage-earner and trench on the margin above the bare rate of subsistence, thus keeping down the standard of life below the point which it would otherwise have attained.

2. Even granting that a tax on wages may in the long run, under favorable conditions, be shifted on profits, it would still be true that in the interval the burden would be borne by the laborer. It is a well known fact that in a general rise of prices, the price of labor is always the last to respond to the general impulse. Wages always lag in the rear of the movement. Now this interval may become more or less permanent. The longer it continues, the more severe will be the suffering that will ensue—and the greater the prospect of the temporary diminution of the consumers' effective demand being converted into a veritable reduction of the laborers' standard of life.

The taxation of labor results in a vicious circle. The weaker the workman, or the lower his general standard of life, the less able will he be to resist the attempts of the employers to reduce his wages to the barest minimum. The higher his wages, the more effective will be his power of resistance and compulsion, and the more likely will be the gradual continual advance of wages. The imposition of a tax on wages thus injures the workman both temporarily and permanently. It reduces his standard of life, and in weakening him it at the same time renders less easy and less probable any future attempt to lift himself out of his impoverished condition. If a tax on wages is shifted on profits at all, it will be only after a long and fierce struggle, during which the laborer may have suffered materially, and as a result of which his whole *morale* may have been lowered. Neither optimism nor absolutism of theory is in place here.

CHAPTER VII.

INCIDENCE OF OTHER TAXES.

The rules which govern the incidence of the other taxes which have not yet been treated are comparatively simple and need but little discussion.

A poll or capitation tax is plainly not susceptible of being shifted, except in so far as it falls on the wage laborer. But even then it must trench upon his margin of necessary subsistence or standard of life, before the conditions under which the shifting may take place, are present. And the possibility of the shifting is not by any means the same thing as the actual shifting itself, as has already been indicated.

A tax on inheritances or bequests cannot possibly be shifted. There is evidently no one to whom it could be transferred.

An excise or internal revenue tax may or may not be shifted. It is virtually one form of the profits tax discussed above. The problem depends for its solution on the consideration of all the complicated points referred to. Still, in the great majority of cases, the tax will tend to be shifted in whole or in greater part.

An import duty is in about the same category. As a general rule, the tax will be shifted in whole or in greater part, but the exact determination will depend on the particular conditions of the individual case.

A tax on monopolies can generally not be shifted, except in the one case alluded to above.

An income tax is a little more complicated. A recent German writer has attempted to prove that an equal tax on income is the only tax that cannot be shifted.[1] And he draws the conclusion that the income tax must therefore be the ideal—the only possible realization of the principle of equality of taxation.

This contention, however, is incorrect, and for two reasons. In the first place, we have seen that there are many taxes which cannot be shifted—like the poll tax, the tax on inheritances, the tax on rent, the tax on salaries, the tax on monopolies. Secondly, and more important, it is untrue that the income tax, as frequently levied, cannot be shifted.

In some countries, as in England, the income tax is simply a combination of taxes on the separate ingredients of income, and it often happens that the so-called income tax is, in reality, a system of taxes on gross revenue or gross receipts, *etc.* In such cases there can be no question that each part of the income tax simply follows the laws of incidence of the respective separate taxes, so that there would be, in respect of incidence, practically no difference between a so-called income tax and the other direct taxes of which the income tax is substantially composed. If the total income is composed of wages, the law of incidence cannot be different, whether we call the share income or wages. If the total income is composed of profits in the broad sense, the tax will be shifted or not, according to the rules of incidence that govern a tax on profits. If the income is

[1] Kaizl, "Die Lehre von der Ueberwälzung der Steuern", 101–118.

derived from house rents, the final burden will be borne in accordance with the principles laid down above. The whole cannot be greater than the sum of its parts. If some of the separate parts are shifted, the whole cannot possibly remain unshifted.

In those cases, indeed, where the tax is levied on pure income in the strict economic sense, the tax is virtually a tax on economic rent, plus a tax on net profits, plus a tax on wages. Now, the tax on economic rent and net profits cannot be shifted, so that for all members of the community, except the wage earners, an income tax levied on pure income would indeed tend to stay where it is put. And in so far as the lowest incomes are exempted from the tax, the tendency would also be for the income tax on the laborers to stay where it is put. But even in such cases there is no absolute certainty that the income tax will not be shifted. And in actual life, of course, we very rarely find either a pure income tax or an equal income tax. As soon as these two conditions are absent, we cannot safely rely on the non-transferability of the tax.

This entire question, however, like that of the incidence of stamp duties and taxes on exchange, as well as the wider problem of the shifting of all taxes from the consumer onward, practically resolves itself into the old problem whether a tax is to be regarded as a cost of production or an outlay for consumption, *i. e.* a mere deduction from revenue.

In all the cases that we have thus far discussed we have traced the shifting of taxes down to the consumer. Certain taxes, we have found, are never shifted; other taxes are sometimes shifted in whole or in part to the consumer. But will not the consumer in turn shift the burden on to some one else?

Here we will remember the theories of Canard, Thiers and Stein, that every tax is shifted on everybody—that every consumer will again shift the tax on a third party, and that this third party who is again a consumer will shift it to some one else—and so *ad infinitum*. And since everyone is a consumer, everyone will bear a portion of the taxes that everybody else pays.

The error of this doctrine lies in the failure to distinguish between productive and unproductive consumption. If every taxpayer were engaged in production and if he paid taxes only on what he employed for the purposes of further production, there would be some truth in the foregoing doctrine. Just as many taxes fall on individuals who are not producers at all,—so that there is no question here of any shifting to the consumer—so every consumer uses only a part of the commodities consumed by him for productive purposes. Every one consumes unproductively. Whatever an individual spends on luxury, or on anything but necessities, is an expenditure which, in so far as he is concerned, does not give rise to any further relation of producer and consumer. If the consumer, on whom a certain tax has been shifted, spends his income in buying diamonds, on whom can he possibly shift the tax? Not on the diamond dealer, because he does not stand in any relation of producer to the dealer. He may indeed buy fewer diamonds than he would have bought if the tax had not been imposed—but he cannot possibly shift the tax. The shifting of the tax is not the same thing as the result of the tax. The two conceptions are entirely different. And what is true of the diamond purchaser is true of all who consume

for purposes other than those of production. Now the end of all production is consumption. And in the long run much of what is produced is consumed unproductively. So that there is no indefinite diffusion of taxes.

Only in so far as the individual purchases or consumes a commodity in order to produce other commodities with it, will the condition arise under which he as producer will be able to shift the tax proper on to another consumer. But here again the possible conditions are not necessarily the actual facts. Just as only some producers,—and even they only under certain circumstances—will be able to shift the tax, so only some of the consumers (who must in this respect be regarded as producers)—and they only in part—will be able to shift the tax. Hence the theory of general diffusion of taxation is utterly untenable, whether the theory take the shape that taxes are all equally spread throughout the community, or that they will inevitably finally rest on some one class.

CHAPTER VIII.

CONCLUSION.

We come finally to the most important part of our our investigation—the question, namely: whether the theory of incidence contains by inference any points of advice to the statesman in framing an actual scheme of taxation. What is the practical result of our discussion? What weight should be attached to the theories of incidence in constructing a positive system of public contributions?

In the first place we have seen that there is no room for optimism of theory. The legislator can not rightfully shut his ears to any cry for reform on the plea that all old taxes tend to become good taxes. Nor dare he complacently snatch any new source of revenue on the assumption that all taxes, no matter how levied, will ultimately be borne by the community at large. The theory that "all taxes fall on everybody" and are therefore just, is incorrect because it assumes that all taxes are a part of the cost of production. This assumption is untrue, because some taxes are levied on persons or property or revenue where there is no further relation of producer and consumer. But even if all taxes were to be regarded as additions to the cost of production, it would not follow that the taxes would be shifted to the consumers in any definite proportion to their faculty, or ability to pay, which is the only test of justice in taxation. If all taxes did really fall on everybody,

taxation would be proportional to expenditure. And expenditure is of all bases of taxation the least equitable.[1]

Thus the optimistic theory must be discarded; first, because the general diffusion doctrine is untrue, and secondly, because if it were true it would result not in justice but in injustice. The legislator cannot shirk his duty in this easy-going way.

On the other hand there is no good reason for pessimism or agnosticism. Some writers, as we know, maintain that it is useless to construct any system of taxation because it is impossible to foresee the ultimate consequences of any tax. But this hopeless attitude we have found to be mistaken. It is true, indeed, that the distinction between direct and indirect taxes is robbed of much of its value. For many of the so-called direct taxes may be shifted in the same way as the so-called indirect taxes. In the common parlance the distinction between direct and indirect taxes is practically relegated to the mind of the legislator. What he proposes should be borne by the original taxpayer is called a direct tax, what he intends to be borne by some one else than the original taxpayer is called indirect. Unfortunately the intention of the legislator is not equivalent to the actual result. We must either revise our nomenclature, or declare the present distinction without much value.

But while it is true that the mere fact of a tax being called a direct tax does not show that it may not be shifted, our preceding discussion has shown that certain general tendencies may be clearly defined. What are these general tendencies of incidence?

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[1] *Cf.* above, p. 91.

All taxable objects may be looked at from the standpoint of property or from that of revenue. Regarded from the first point of view, we have found that unequal or partial taxes on revenue-yielding property will tend to be a charge neither on the community nor on the future possessors, but only on the holders at the time the tax was imposed. The Capitalization of Incidence theory comes into play whenever a new tax on certain classes of property is imposed or the rate of an existing tax is altered. The tax is never shifted, but its results are serious, whether for good or for evil, to the class of existing owners alone. The lesson which the capitalization theory has to teach is that the evils of inequality of taxation are doubly intensified when the inequality attaches to revenue-yielding property, and that the ultimate equalization of the burden, if it come at all, can be attained only at the expense of the unfortunate present holders.

If we look at taxable objects from the standpoint of revenue, we have found that there are only two kinds of revenue on which a tax, when once imposed, necessarily remains. These are economic rent and pure profits—or, to use a term which has sometimes been adopted to include both elements, economic surplus. A tax on surplus can never be shifted, because surplus is not a part of cost of production, but the result of the process of production. Thus, taxes on inheritance, gifts, gains from speculation, *etc.*, can never be shifted, because they are a part of surplus, of pure profits. Thus, if it were possible to find a class whose revenue consisted exclusively of economic rent and pure profits, the legislator might single out this class either for taxation or for exemp-

tion, according as it were the general policy to have taxes paid directly or indirectly.

On the other hand, all other taxes would tend, in the abstract, to be shifted, until they fell ultimately on this surplus, because all other taxes would tend to form a part of cost of production. And the conclusion might be drawn either that taxes should be levied only on net profits—or, on the contrary, that the only tax lexied should be an indirect tax on commodities, because it would, in the long run, fall on profits, but without the knowledge of the profit-receiver. According to both of these possible conclusions, taxes on wages or labor would be regarded as part of cost of production, and would be shifted from wages to profits.

Such conclusions rest on doctrines very like those that we discussed under the head of "absolute theories." They would tend to be true only in an isolated community where there was absolute mobility of labor and capital, and where the economic man reigned supreme. In actual life these tendencies would be met with the counter tendencies of "economic friction." Taxes on land would often tend to stay where they were put, because of international relations and lack of absolute transferability of capital; taxes on wages, if cunningly imposed, might lead to a lowering, instead of to a heightening, of the standard of life; taxes on occupiers of houses would not necessarily be shifted to the owners, and so on.

But above all, we must distinguish between kinds of revenue and classes of society. Economic surplus —pure rent and pure profits—may mean the entire revenue of some individuals, but only the partial

revenue of others. In all society there are cross sections which merge into each other. As we have already pointed out, the mere fact that a tax may be shifted by a class does not show that the tax may not press very unequally upon individual members of the class. And if we shift the point of view from social classes to individuals, we see how untenable is the argument that the best tax is an indirect tax, because it will ultimately be shifted to the economic surplus of society. For the tax could get to economic surplus only through the productive consumption of individuals, *i. e.*, through expenditures which would again create a relation of producer and consumer. But as we have just pointed out, not all consumption is productive consumption, and expenditure in general is the least equitable basis of taxation, because it always bears with greater weight upon the less fortunate or more deserving members of any social class.

The words of advice, therefore, which the correct theory of incidence has to offer to the legislator are to choose primarily those taxes whose results can be foretold with some degree of accuracy—to take at all events some taxes where the chances of shifting are very slight indeed, and to take on the other hand taxes which will be shifted in their entirety. In the former class are included taxes on monopolies, net profits, inheritances, and certain forms of property and income. In the latter class are included taxes on commodities in the shape of import duties, certain excise taxes and licenses, and taxes on gross receipts of corporations. If the legislator desires to reach certain classes of society directly, let him choose the first batch of taxes; if he desires to have

his taxes paid unawares, let him choose the second. If neither the one nor the other kind of taxes suffices for the public revenue, the legislator will be compelled, as is often the case, to resort to taxes whose incidence is more uncertain, and where the intentions of the legislator may be entirely frustrated by the actual course of events.

The theory of incidence has therefore an important, but by no means the final, word to say in the elaboration of a tax system. It does not by any means render unnecessary the study of the principles of justice and equality in taxation. If neither the optimistic nor the pessimistic nor agnostic theory of incidence can be any longer upheld, the student of public finance must seek to elaborate the rules of equitable taxation without any reliance upon the automatic operation of presumed absolute laws. He must endeavor to make a choice of public revenues which in themselves and in first instance satisfy the requirement of the principles of economic justice; and in so doing he may be guided by those principles of incidence—but only by those—which are definite and well ascertained. The theory of shifting of taxation hence is an aid to, but not a substitute for, the study of economic justice. As it has been said, the doctrine of incidence is neither the archangel nor the archfiend of the science of finance.

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